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Broadband

MAY/JUNE 2000

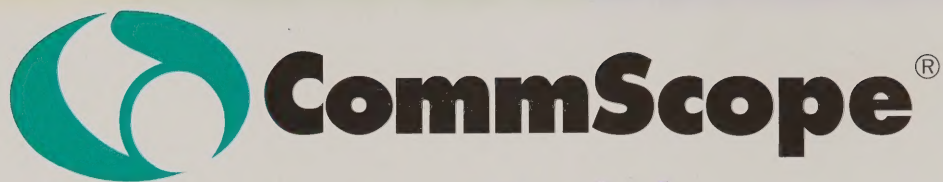
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Korea: how the web was won
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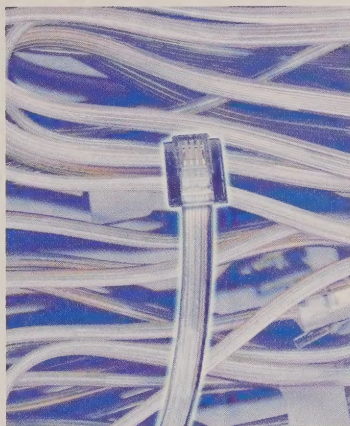
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contents

may/june 2000

high-wire acts

ADSL may be God's gift to telephone companies competing in a high-speed world. But cable operators don't necessarily need to be nervous. Our step-by-step ADSL guide looks at what it is, how it works and why every telco worth its copper is getting so excited



24

Features

- 4** *diary: region*
snapshots
Vignettes from our television world... plus a look at who's hot and who's not around the region
- 18** *news analysis: south korea*
site inspection
Korea's webcasters are presenting cable and terrestrial networks with their greatest challenge yet
- 20** *company: one virtual*
virtual reality
Mel Velarde's reality puts broadband well within the reach of the average cable guy. It also promises to dig the Philippines out of its dire educational straits
- 22** *time capsule 2001: marketing*
premium tiers
Need another pen, keyring, card holder, calendar? The second of our year-long Time Capsule 2001 series looks at marketing chiefs' finest premium moments
- 30** *programming: olympics*
games set and watch
Olympics organisers have their eye too firmly on the terrestrial revenue ball to play with the internet
- 36** *show preview: broadcast asia 2000*
loud and clear
Who says what about the Singapore show in June
- 38** *country: singapore*
hot wired
Singapore may be the world's most wired nation. But there is a price to be paid for being so high up the techno learning curve
- 40** *research: china*
money or the box
Warburg Dillon Read's Joe Zhang and Raymond Jook look at tomorrow's China success stories — and say why they're betting on ADSL and cable modems
- 42** *show review: philippines*
broad minds
Broadband was the sexiest thing at this year's annual Philippines cable show. Well, almost. Janine Stein listened to speakers, delegates and entertainers talk about the birds and the bees and other facts of life
- 44** *review: programming*
women's room
Mansha Daswani looks at CNBC Asia's *Asian Working Woman*, a new weekly show that's still mostly too cramped to be considered stylish
- 46** *opinion: broadband*
pull of gravity
Niall Rudd uses broadband benchmarks to show how Asia might become the world's internet centre of gravity

Regulars

editor's note **2** people **12** satellite focus **48**
channel guide **50** conferences **54** quote zone **56**

editor janine stein
e-mail: janine.stein@informa.com

editorial assistant mansha daswani
e-mail: mansha.daswani@informa.com

Informa Asia Publishing
6th Floor, Hollywood Centre
233 Hollywood Road
Hong Kong
tel: (852) 2865 1608/2854 3222
fax: (852) 2528 0977

contributors

australia: liz fell; **india:** girish garkal;
japan: mark schilling; **south korea:**
hordon kim; **satellite:** mark long

design nick berriff, chi wing cham

production/advertisement
stuart wilson

advertisement director katrina coyne
tel: (44 207) 453 2349
e-mail: katrina.coyne@informa.com

sales executive patricia arescy-corbett
e-mail: patricia.arescy-
corbett@informa.com

marketing director
liz moffett
e-mail: liz.moffett@informa.com

marketing executive david tomlinson
e-mail: david.tomlinson@informa.com

circulation/subscriptions pat martin
tel: (44 207) 453 2328
fax: (44 207) 453 2347
e-mail: info.media@informa.com

customer service corinne john-baptiste
tel: (44 207) 453 2331
e-mail: info.media@informa.com

managing director ian hemming

publisher lydia blackwood

editorial director sarah walker

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Informa Publishing Group Limited
Newlands House
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new new things

YOU can never be too rich or too thin... or have too much bandwidth. Is this yet another of the many cyber-age adjustments we are being forced to make to long-held (and well-used) beliefs, practices and phrases? Absolutely. And it's the reason why the magazine you hold in your hands looks and feels different.

What you have before you is *Cable and Satellite Asia Plus Plus*. More than five years after our launch, the industry is virtually unrecognisable. You can get CNN on your mobile phone, read the *South China Morning Post* on your Palm Pilot, get videos on the web and send e-mail on your television. Along with 70-plus channels, some platforms are offering internet access speeds so dizzying they could only have been dreamed about when we broke out our first 9,600 modems and tapped "pine" onto our screens. Plus there's telephony over cable. And video over telephone lines. And cyber-babes. And digi-scents. And portals, vortals and snortals.

We peered into next week, next month and next year. And what we saw was sexy, lithe, long-legged and high-speed. It was all about faster vehicles, fatter pipes and minds broad — and brave — enough to zoom along with whatever arises, taking advantage of every option and opportunity.

The question we then had to ask ourselves was: could the current *Cable and Satellite Asia* be stretched to cover all we saw? The answer was: yes and no. Yes, because we've always covered the cutting edge of the industry and there's no reason to stop. And no because talking only about "cable" and "satellite" seems so last century.

The result is what you see now. Welcome to *Broadband Asia*, the next incarnation of *Cable and Satellite Asia*.

Our mission is to provide a map for a multichannel industry on speed. Ours is also — as it always has been — to reason why, which means we're looking at a broader industry in much the same way as we approached the debut and growth of the cable and satellite television sector for more than five years — in-depth, with analysis where it's needed, and with a commitment to offering the most topical industry info in a user-friendly format.

We will, as we strap ourselves in, look at new broadband technologies, interactive content, who gets it and who doesn't and the people and companies who lead the way. We'll be looking at who's wired and who's wireless, who's mobile and who isn't, and at the regulators charged with policing a whole new age. The issues as we move into increasing digital complexity are endless: billing, customer care, branding, marketing, advertising, research and, of course, the all important content. Everything, in fact, that presented itself to Old Economy broadcasters, multiplied by 100 or even 1,000 and revved up to the speed of light.

Broadband Asia is a crucial information tool for an industry that has never been allowed to catch its breath. The future is already broader than we ever imagined it could be. Strap in and hold tight.

janine stein

Janine Stein
the Editor



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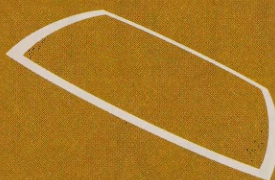
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snapshots

Snippets of life on Asia's cable and satellite television scene

SPARE CHANGE

Channel [V]'s ownership shuffle

CHANNEL [V]'s ownership ebb-and-flow is the latest must-watch on the Asian television scene. With Sony Pictures Entertainment out for reasons which vary from just-not-interested-anymore to the one Channel [V] is pushing — wanted-a-bigger-stake-but-couldn't-have-one — Star TV has bitten off an even larger say in the running of the channel and its revenues (or losses) than it has until now.

After a few weeks of hinting that one of the other partners may pick up the stake Sony is walking away from, no-one came forward to take down the for-sale sign on a business in which minority partners' control is questionable and over which Star TV has the final word.

Star TV officially announced at the end of April that its new ownership stake was 74.2 percent. How much money exchanged hands was not disclosed. Officially, too, EMI now has 12.5 per cent, and BMG and Warner Music retain 6.65 percent each. That was on April 19, and, by Star TV's own admission, the ownership levels rise and fall according to a complicated joint venture matrix dependent on who pays the bills in any given month. And that's as far as Star TV is prepared to go by way of explanation.

The latest ownership shuffle barely masks the questions being asked: What, exactly, is Channel [V] doing, where is it going, and, perhaps most importantly, who is most keen to continue paying for it because this girl is certainly not hip-hopping on her own two feet at the moment.

The strategic or financial advantages of the minority partners in this joint venture seem cloudy right now. It's also not that easy to get out; the rules of engagement are said to force existing partners to sell to each other.

What is clear is that, Channel [V] needs money, just like it always has. Eighteen

months ago, the then new boss, Steve Smith, was supposed to have had US\$36 million, raised from a fresh capital call which, at the time, was supposed to have eventually left Star TV with 62 percent of the venture, Sony and EMI with 15 percent each, up from their former 12.5 percent; and BMG and Warner Music with diluted stakes of four percent each. The money

Presuming that the original capital call did not go through as planned, every day that goes by Channel [V] needs more money. And every dollar put in by one partner and not matched proportionately by the others means a dilution of stakes. Industry sources doubt that major moolah is being stumped up by the partnership's minorities. "People with sound business

sense are unlikely to go for funding someone else when they have their own funding needs," according to one TV executive.

Although Star TV and Channel [V] are reluctant to discuss money, what is obvious is that times have changed. What was a good idea in 1994 when Channel [V] launched looks, in retrospect, like a bit of a lemon for partner companies that have gone on to merge, acquire, and/or develop their own satellite TV interests in the region. There's also the not insignificant and growing power of rival MTV Asia.

On top of that comes talk of an IPO, which Channel [V] drops strategically into conversation without going into much detail.

What seems to be happening is that Channel [V] is readying its dotcom assets for something; the team could, indeed, be serious about its own IPO, or it could simply be drumming up profile and column inches on the back of global tech-fever. The latest IPO seeds were thrown out at the lunch Channel [V] held only one day before the

US Nasdaq went south at the speed of sound mid-April, dragging Asia and the rest of the world behind it as soon as markets opened the following Monday morning.

On the other hand, Channel [V] does have solid successes to boost its profile. This makes the other murky manoeuvrings, which look like the tactics of a cornered business trying to pretend nothing is wrong, seem even more odd.

Its numbers in China, for one, look great. And anyone who wants to mess



would have been doled out over three years, which would have taken the channel into 2001.

With 18 months to run on that agreement, the deal on the table during Smith's first few months on the job appears to have changed. While Star TV's original 50-percent stake was upped to around 62 percent, Sony and EMI never, in fact, raised their stakes above 12.5 percent. Star TV's increased stake came from the dilution of the stakes of BMG and Warner Music.

with them needs to take on the impenetrable integrity of ACNielsen Media International. Although Star TV is responsible for releasing ACNielsen's data, there can be little doubt that Channel [V] is shining in the reflected glory of Star TV's admirable commitment to independently audited figures on the mainland. According to Duncan Morris, ACNielsen Media International's client services director for Hong Kong, this is the first-ever peoplemeter study commissioned by an individual client in Asia.

According to the first published results, Channel [V] is the eighth most popular channel overall among viewers aged 15-24 in Star TV households in six mainland cities, including Beijing, Shanghai and Wuhan. Despite a see-saw attitude towards foreign programming and indications that not all programming bans were created equal, satellite television remains officially verboten in China. The peoplemeter survey also showed that Channel [V] is watched for four hours average a month, compared with the three hours notched up by local rival, the state-owned CCTV3 music channel.

What could be happening is that Star TV is playing a waiting game. The more money it puts in to keep the service going, the bigger its share. The theory is that once Star TV has a big enough share, it will be little problem to shuffle papers and reallocate costs and to turn the service around quickly.

Six years and up to US\$100-million after the channel was launched, the biggest winner has been Star TV. "What is happening now is a bonus for them," says one industry insider. "They get a whole channel for a lot less money than it would have cost them to do it all alone."

What few doubt is that Star TV will keep Channel [V] going despite its sometimes-status as the runt of the programming package behind powerhouses such as ESPN and Star Sports, and wholly owned channels such as Star World. "It's a serious part of the bundle," says an inside source. "And it seems to be losing money for a reason."

• • • • •

SHORT SHOCK

cable supply dwindles as demand soars

TALK to any South Korean network builder/operator and he'll tell you the same thing: the biggest issue he faces right now is cable supply. Driven by frenetic growth in demand for internet

access, the market for fibre optic cable in South Korea has jumped from US\$2 million to an estimated US\$30-US\$50 million in just one year. While the surge is welcome in the post-economic crisis era, it's causing a global headache for operators who can't get it fast enough.

How are fibre manufacturers coping? Well, in two words, they aren't. Or not very well. Manufacturing plants are stretched to the limit as global demand surges on the back of the current high-speed, two-way frenzy, and fears are that the shortages could drive an already thriving black market for *faux-cable*.



Manufacturing plants are stretched to the limit... fears are that the shortages could drive an already thriving black market for *faux-cable*



From the time orders for trunk cable are placed, it's a 90 day wait to shipment — and that depends on how big the order is, vendors say. For fibre optic cable, operators are looking at waits of between 15 and 18 months. Delivery dates for orders being placed now are already into the second quarter of 2001. Drop cable is 160 to 200 days. "If people aren't planning far enough in advance, they're going to run into trouble," some US vendors say.

The danger is that hard-pressed operators may turn to counterfeit cable to ease the current shortage. They may also settle for cable that could fall short of full two-way requirements over the long term. "The market is wide open for vendors who would not normally be there," said one observer.

The US domestic market, including upgrades by AT&T, is soaking up much of the world's cable supply. Other players are keeping pace, and that includes South Korea and Taiwan. India is "cranking up", according to one vendor, "even if it's all

talk so far... but we expect real activity to hit India soon."

Demand is highest for drop cable, which needs to be replaced as networks upgrade for high-speed data delivery. If operators started with good-quality trunk cable, it should be able to service their two-way demands.

The surge in demand could not have been foreseen, according to some. "And even if it was, it would have been impossible to add that kind of capacity to a plant."

Manufacturers have notified their customers that lead times are lengthening, and say Asian operators are getting in the queue. The situation is not expected to improve any time soon. As one vendor said: "There is no light at the end of the tunnel".

US cable manufacturer, CommScope, says it is responding to the increased worldwide demand for bandwidth-enabling products by adding to capacity in all HFC-related product areas. "We are more than doubling production of our fibre optic as well as wireless products and looking to add international production facilities," the company says.

CommScope's first quarter 2000 Asia-Pacific sales were up almost 50 percent from the same period in 1999. Overall sales were up 38 percent. "We will continue to increase capacity to keep up with this type of worldwide demand," the company says, declining to predict shipping lead times.

The knock-on effect on the supply of related equipment, including connectors, is being felt as well. However, vendors in this market say their lead times are nowhere near as stretched as the cable guys. "Our lead times have gone out but not as drastically as the cable suppliers," says Joel Ogle, PPC's sales director for Asia and the Far East. PPC's typical lead times are two to three weeks. These have been stretched to between four and six weeks. To some extent, PPC has been protected by a campaign that "coincidentally coincided with the CATV boom," Ogle says.

High demand is not expected to ease anytime soon. The telecommunications industry, according to CommScope's Frank Logan, executive vice president for international sales and marketing, "will continue increasing its support of HFC architecture as the most cost-effective way to provide multi-channel video, voice and high-speed internet access to their 'last mile' customers".

FLIGHT ATTENDANTS

the executive dash continues

THE exodus of regional satellite programming executives, which started with the flight to internet start-ups last year, is hitting chief executive ranks hard. Already, five network heads have left or are expected to leave by the middle of this year. And, if the industry gossip mill is to be believed, there will be more.

They include Walt Disney International Asia-Pacific executive vice president, Ed Borgerding, who has left to set up his own dot.com incubator, and Paul France, president of business news network CNBC Asia, who will be heading up a new 40:60 regional joint venture between Singapore Press Holdings (SPH) and

digital technology company, The Fantastic Corporation. The new joint-venture, Fantastic One, aims to bring together SPH's content and Fantastic's technology. France has already begun working on the project, and starts full time from June 30.

Others in the departure queue are James Buklarewicz, chief executive officer of Sony's AXN Action channel, who takes up a London-based position at Eastern Europe's major cable operation from June; Bruce Tuchman, general manager, Nickelodeon International's Global Network Ventures, who joins Nickelodeon's online venture; and Sandy Brown, managing director of ESPN Star Sports (ESS). At least two other high-profile departures could be announced by year end, one of them for dotcom-dom.

Other senior departures include Discovery Channel's Asia programming head, Manny Ayala, who is joining an internet start-up based in Hong Kong from early June; and Discovery Channel's distribution chief Mark Lay, who is taking a year off to travel with his wife, Karen Leong, affiliate sales and marketing director of Hallmark Entertainment Network. Both leave their jobs in May.

Discovery's ranks in Singapore are further depleted with the departure of Eric Lynge and Anya McDonald, both for hot internet start-ups. Lynge joins advertising company, Doubleclick.com, which has a joint venture in Asia with Asiaticom.com's asiacommerce division, and McDonald moves to a regional marketing role with SurfingBananas.com in May after five years at Discovery.

Internet content/e-commerce/advertising company, Asiaticom.com, continues to soak up talent. Its latest acquisition is Walt Disney Television's Hong Kong-based Asia-Pacific attorney, Su-mei Thompson.

Although slower at the moment than the departures, the flow of new appointment announcements appears to be gaining steam. France's replacement has not been announced, but industry sources put CNBC finance head, Steve Hoffman, or programming boss, Chris Blackman, in lead positions.

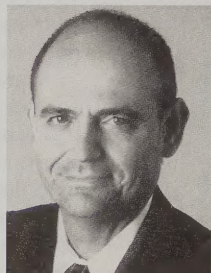
At ESS Brown will be replaced by surprise appointment, Rik Dovey, currently senior vice-president of production, operations and engineering. Initial speculation was that either programming and event management senior VP, Russell Wolff, or senior vice president for advertising and integrated sales, Chris McDonald, were first in line for the hot seat.

AXN's Buklarewicz has been replaced by ex-Columbia Tristar exec Tod Miller. At Hallmark, Terence Yau has replaced Jeff Johnson as vice president and managing director. Yau is based in Hong Kong.

Replacing Tuchman at Nickelodeon is Jack Efromson, the former vice president for Nickelodeon International's technical operations. He will be based in Miami.

Elsewhere in the industry, Zenith Media Asia CEO, Antony Young, moves to digital media specialist AdXplorer as CEO in May. The internet start-up focuses on marketing strategies, campaign development (placement and planning) and measurement specifically for digital media. The company has offices in Singapore, Hong Kong and Beijing and expects to open in Taipei by year end.

in flight moves



Left to right: (Top row) Manny Ayala, Jack Efromson, Mark Lay;
(Middle row) James Buklarewicz, Terence Yau, Sandy Brown;
(Bottom row) Bruce Tuchman, Eric Lynge, Paul France



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THOMSON broadcast systems SDN.BDH. Lot 470, Ground Floor Side Entrance,
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PARTY FAVOURS

The chicken noodle network grows up

ON JUNE 1, 1980, everyone called it the Chicken Noodle Network. On June 1, 2000, CNN celebrates its 20th anniversary as part of global giant AOL Time Warner. In between, liberally helped by the Gulf War, the space shuttle Challenger and Monica Lewinsky, the network entrenched the concept of 24-hour TV news and information.

Today, CNN has 27 international bureaux, including seven in Asia, more than 4,000 employees, distribution on 23 satellites and more than 800 affiliates. It is seen in more than 151 households worldwide and in 212 countries and territories. It also produces 12 websites which are among the world's most hit, and was the first mobile telephone news and information service to be available globally with pan-regional content.

The CNN portfolio is still very thin on Asian languages, but it has made a stab at Japanese among the 10 languages in which content is delivered. And, despite being yanked off the China beam every year around June 4 by Tiananmen-wary mainland authorities, its commitment to Asia is never really questioned outside the periodic rantings of the odd conservative leader whose notion of news is synonymous with political control. More than 50 journalists based in Hong Kong produce 30 hours of programming for Asia-Pacific audiences, including *Asia Business Morning*, *Asian Edition* and *Inside Asia*.

Chicken noodle soup? If only our screens had souls.

PHONE TAG

Telstra bags Hong Kong Telecom assets

HIS audacious deal-making abilities have left bankers and analysts open-mouthed. But, before the dust had even settled on Richard Li's alliance with Australia's government-owned Telstra Corporation Ltd, analysts were calling it a thinly veiled effort at disposing of the assets of Pacific Century Cyberworks' (PCCW) earlier conquest — a controlling stake in Hong Kong's dominant telecommunications company, C&W HKT.

The deal, said one Australian analyst is "all about snapping up stakes in the mobile and offshore cable assets of HKT should PCCW acquire it... it's about PCCW/Telstra carving up the former monopoly Hong Kong telco into small pieces and floating the pieces."

PCCW's new alliance with Telstra is reliant on the successful completion of PCCW's acquisition of Cable & Wireless' 54 percent stake in C&W HKT. Uncertainty hovers over the C&W deal with the plunge in the value of PCCW stocks by about 50 percent since the US\$35.9 billion agreement was struck in mid-February; PCCW shares sank to lows of HK\$12.80 on Monday, April 17, after mid-February highs of above HK\$26.35. By end April, they were hovering around the HK\$15 mark.

Singapore Telecom, which lost out to PCCW despite a US\$1-billion sweetener from Rupert Murdoch's News Corp, and other international parties were said to be keeping a close watch for a gap into which to slap a bid back on the table. However, the rumour mill appears to have been little

more than a fishing expedition by Li-partner wannabes. As Li well knows, anything can happen, but as far as he is concerned, his bid has the backing of the Cable & Wireless board and it's going ahead.

Telstra, whose eye remains firmly on HKT assets, is said to have been after a way into HKT for months, and Li is believed to have approached the cash-rich telco early this year for funding help in the HKT takeover. Telstra was, however, prevented by its government ownership from participating in the takeover.

The Telstra-PCCW deal announced mid-April is for the creation of a pan-Asian internet, data, IP and wireless business services group. A major component of the memorandum of understanding is a direct investment of US\$1.5 billion by Telstra in PCCW in the form of a convertible note, which will give Telstra a two-percent stake in PCCW. The note issue is subject to PCCW's share price performance over six years.

The Telstra money will help Li reduce his massive debt and support the successful completion of the C&W HKT acquisition. And the small percentage Li has had to give away in order to achieve this is considered well worth it.

The sexiest part of the deal is the roll-out of PCCW's ambitious broadband Network of the World (NOW) in Australia. NOW's HTML content will be offered on Telstra's extensive broadband infrastructure. NOW is developing programming with TWI, the televised sports division of Mark McCormack's IMG group, and Telstra/PCCW may go on to develop e-commerce, content and applications services.

Telstra will also pay PCCW cash and assets for a 60-percent stake in a new US\$1.5-billion pan-Asian mobile telephone company that the two companies will set up. The company will include HKT's mobile networks and business and Telstra's existing mobile assets in India and Sri Lanka and, possibly, a potential business in Thailand. The IP backbone company created by the joint venture will pool the extensive submarine cable resources of HKT and Telstra. The two currently compete in regional carriage and hubbing.

However they carve up their alliance, Telstra and PCCW continue to be seen as one old and one new economy players. "Li may be new media," said a Sydney-based observer, "but Telstra and HKT are infrastructure-based telcos." And, despite efforts to add new media gloss, they haven't yet convinced anyone otherwise.



CNN Moments



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BOLLYWOOD BOULEVARD

entertainment moguls' walk of fame

WHAT happens when mining, minerals, steel and celluloid combine? The outcome, in the Indian entertainment context, is less science project than mega-funded movie-mania.

The high-octane group of Indian investors in the latest content-creation bid are steel magnate L.N. Mittal (one of Britain's richest people, according to a recent UK newspaper survey), mining and metals promoter Gokul Binani, international Bollywood film distributor Kishore Lulla and film financier Bharat Shah. The four have agreed to merge all their entertainment businesses in India under the B4U brand. They also say they intend to pump up to US\$250 million into broadcasting and film-making in the near future.

Their entertainment business consolidation is a precursor to a B4U IPO. The earlier film finance joint venture of the three non-resident Indians (NRIs) Lulla-Mittal-Binani trio and Bharat Shah, Mega Bollywood Productions (MBP), has already been merged into B4U.

With its high-fashion name, B4U was launched as a Bollywood movie channel in the UK in September 1999, followed by launches in the US and West Asia. Plans for the Indian market include Bollywood blockbuster production and finance, a domestic Bollywood movie channel, B4U India, and B4U Music for the domestic Indian market. Future plans feature a Tamil movie channel and an e-commerce entertainment portal. B4U-India will aim for the premium slot with at least one new blockbuster a week. It will also have a general entertainment band during the 8pm-10pm prime time period. The music channel will be a 24-hour combination of Indi-pop and Bollywood film music, of which most rights already belong to the group.

In the first year, the group expects to pump in US\$90 million to finance around 20 films and acquire the rights of another 30-40 films. Group spokesperson and CEO of B4U Worldwide, Kishore Lulla, says the company spent around US\$50 million in three months earlier this year buying domestic rights of about a 1,000 films. Lulla's company, Eros International, controls around 70 percent of the international distribution rights of all Bollywood films.

MOUTH FROM THE SOUTH

Zee goes shopping in southern India

SUBHASH Chandra has strengthened his hand in India's wired world even further by buying out a major player in the south. The acquisition by Zee Telefilms Ltd (ZTL) of a 61-percent controlling interest in the Malayalam satellite network, Asianet Communications Ltd (ACL), for US\$60 million has also given Chandra's outfit a powerful foothold in southern India. Zee has the option to hike its stake to 73 percent. The deal adds 4,000 hours of original programming and nearly 1,200 Malayalam movie titles to ZTL's programming might.

Things aren't, however, as swell as they might be in the Zee camp. In early May, ZTL started making delaying noises about its proposed US\$1.5-billion ADR issue. This followed worse than expected performance and the perception that the scrip is overvalued, ZTL chairman, Chandra, told analysts in India.

ZTL has led the fall in media and infotech stocks on Indian bourses. Its 70-percent fall in six weeks, from a high of Rs1,500 to Rs546 by mid-May, reflects market rejection of unaudited figures. Zee announced on May 10 that its net profit had more than trebled to US\$60.7 million for the financial year 1999-2000 from the previous year's figure of US\$13.8 million. However, the company admitted it 'sold' part of its film library to group company, Asia Today Ltd, and entered the sales proceeds as an additional gross profit of US\$42 million. Adjusted figures put real net profit at US\$18.4 million, a growth of 34 percent.

At the same time, a ZTL annual general meeting unanimously approved the board's decision to acquire Asianet.

The cash/stock deal, which values Asianet at US\$90 million, leaves the existing management, headed by ACL founder and pharmaceutical exporter, Raji Menon, firmly in place. Menon will acquire ZTL shares worth Rs265 crore (US\$59.6 million), and gives up the right to launch competing channels in the same market. Menon, in turn, gets a Rs100-crore (US\$22.5 million) non-compete fee, and less than one percent of ZTL stock. Asianet branded services will be maintained separately from the Zee and Alpha brands.

The deal came on the eve of Asianet's expansion into the regional channel

market in Kannada, Tamil and Telegu languages. An end-April launch date had already been set for the Kannada free-to-air Asianet Kaveri.

Asianet sources say the Malayalam network had found it difficult to survive as a single-channel outfit in the face of fierce competition by the Kalanidhi Maran-owned Sun TV network. Sun TV operates the popular Malayalam channel Surya TV.

♦ ♦ ♦ ♦ ♦

AD HOC

Japan's BS stations unveil ad strategy

THEY'VE pondered strategy and spent billions on technology. Now Japan's digital broadcast satellite (BS) stations, backed by the five major Japanese networks, are moving on to the next critical stage — developing advertising rate structures that won't cannibalise their parent companies' businesses.

Instead of the "time rank" system that the networks use to charge for spot ads, BS stations will introduce a "programme rank" system based on ad rates per programme. The system charges advertisers per programme, and fees are based on the revenue needed to recoup production costs. The BS operators will dump the array of additional fees levied by the networks in favor of a simplified fee structure.

An added advantage of this system, they say, is that with no firm idea yet of how many viewers will be watching, BS stations cannot easily set spot ad rates. The new stations haven't yet said how they will persuade advertisers to break their habit of counting eyeballs.

In addition to their new advertising concept, BS stations are also studying commission fee structures for interactive BS data broadcasts, based on viewer response and product sales figures. Unlike conventional TV advertising, BS data broadcasts will make it possible for viewers to shop, order and pay on-line, rendering usual ad fee structures inappropriate.

Unlike NHK and Wowow's BS services, which are subscription-based, the BS channels of Japan's five commercial networks will broadcast free-to-air and earn revenue almost exclusively from advertising. With 15 million households currently receiving analogue BS broadcasts, the BS advertising market is expected to amount to Y600 billion (US\$5.6 billion) in 2001, the first full year of digital BS broadcasts. ☞

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Elias B Zaccack joins Americom Asia-Pacific as managing director. Based in Singapore, Zaccack replaces **Cynthia Dickens**, who has assumed the post of vice president, international sales, GE Americom. Dickens will be based in Maryland. Zaccack was formerly regional sales manager for Scientific-Atlanta Asia Pacific and prior to that, international marketing manager with GE Astro Space.

MTV Mandarin has appointed **Michael Cheng** as vice president and general manager of MTV Taiwan. Cheng will be based in Taipei. He joins the network from CTN Entertainment Channel, where he was chief director. Cheng has worked for Star TV and the Koo's Group, one of Taiwan's two most powerful multi-system cable operators.

MTV Networks Asia has promoted **Peter Bullard** to senior vice president and managing director of MTV Southeast Asia, and **Harry Hui** from senior vice president/managing director for North Asia to executive vice president for North Asia. Bullard joined MTV Networks Asia in August 1999 as vice president for advertising sales. He previously worked for CNBC in Europe.

Robin Paxton has been promoted to the position of executive vice president and managing director at Walt Disney Television International (Asia Pacific). Paxton was formerly senior vice president and managing director of broadcasting and production. Also at the Hong Kong office, **Nigel Haunch** has been promoted to vice president and managing director of broadcasting. Haunch joined Disney in 1998 as regional director, broadcasting.

Austar United and Foxtel have appointed **Patrick Delany** as chief executive of their joint venture production/distribution company, XYZ Entertainment. Delany was the managing director of East Coast Television before it was acquired by Austar.



Jennifer Fletcher has been promoted to vice president of advertising sales for Turner International Asia Pacific. Fletcher, based in Hong Kong, was previously director of advertising sales.

Richard Young has been promoted to vice president of ESPN Star Sport's event management group. Young will manage the relationships with major rights holders and event suppliers, as well as operations,

client servicing, broadcasting and syndication of events. Former Singapore Rugby Union national coach, **Justin Sampson**, has been appointed as manager for the network's integrated advertising sales.

News Corp's listed technology company, NDS, has appointed three senior technologists at its Beijing research centre. The appointments are part of the company's research and development expansion in China. The three new appointments are systems engineer **Chang Yi**, **Song Lidan** as senior pre-sales engineer, and **Zhang Hongyu** as technical account manager. NDS has also appointed **David Lawton** as technical manager, NDS Asia Pacific. Lawton relocated from NDS' Hong Kong office, where he has been since 1995, to assume the post in Sydney.

Carol Turner has been appointed director of public relations for Turner International Asia Pacific Ltd. Based in Hong Kong, Turner will handle all public relations activities for the CNN News Group, including CNN International (CNNI) and CNN Interactive, as well as Turner corporate issues in the Asia-Pacific region. Turner moved to Hong Kong from the company's London office, where she was public relations director for CNNI in Europe/Middle East/Africa, with specific responsibility for the Nordic region, Spain, Italy and Portugal. She joined Turner Broadcasting in September 1996.

MTV India has appointed **Charlotte Lester** as MTV's new communications director to replace **Hemant Kenkre**, who has joined dotcom company, cricketnext.com, as CEO. Lester was previously with public relations firm, Good Relations. ☺

and then there was...

AUSTRALIA

AUSTAR United Communications buys 50 percent of TV home-shopping network, TVSN, which is still attempting to carve a viable business of its shattered regional dreams. The purchase gives TVSN immediate US\$6 million bridging finance and a total working capital of US\$12 million. It also allows Austar to boost the electronic commerce side of its interactive TV and Chello broadband services. TVSN lost US\$14.2 million last year on revenues of US\$18.1 million.

New operators aren't deterred by old problems, and Boomerang TV bounces onto the scene. The new satellite-delivered pay-TV service comes courtesy of local ISP, TPG, and will carry five standard TV channels initially: CNN, CNNfn, Turner Classic Movies/ Cartoon Network, ESPN and Animal Planet. Subscriptions, packaged with TPG dial-up internet access, cost US\$12 a month. Premium movies are being planned.

While C&W Optus approaches News Corp and the UK-based NTL after its talks with Kerry Packer's e-corp for a stand-alone broadband venture disintegrate, the federal government defers the introduc-

tion of digital TV legislation. The idea is to stop datacasters from acting like broadcasters.

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CHINA

CHINESE president Jiang Zemin takes in the Johannesburg facility of South Africa's media and technology company, MIH Ltd, during his global walkabout. MIH, which has spent untold millions on capturing China's DTH satellite and multimedia heart, is delighted, especially when Jiang praises the company for helping to promote Chinese language and

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At home, the massive Shanghai Cable TV Network saves up more than US\$190 million for a three-year infrastructure upgrade. By the end of this year, the network will have a million internet-ready households, the cable operator says. Other networks rushing along the upgrade highway include Shenyang, Wuhan and Hebei.

At the same time, authorities in Beijing plot their next regulatory move for cable funding and financing. Despite foreign companies lining up to invest in mainland networks, central bodies are not convinced that this is in the interests of the nation and are not expected to throw open the market anytime soon. The regulations could be ready by year end.

Digital solutions provider, Divicom, or rather Harmonics Inc since its merger with the Silicon Valley technology company, appears unfazed by the erratic China situation. Two new deals in its rapid-fire mainland progress are the digital head-end contract for the Guangdong Broadcast and Network Centre and a deal with Nanning Cable Television in Guangxi province, which selected DiviCom's head-end solution for China's first deployment of a digital hybrid fibre/coaxial CATV system.

All these new operators are encouraged by rising mainland TV advertising figures, which were up 38 percent last year compared to 1998, according to a survey conducted by the Guangdong Kangsai Marketing Service Company. Total TV adspend last year was US\$6 billion. Beijing, Shanghai and Guangzhou — China's three largest cities — accounted for US\$986 million.

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HONG KONG

IT'S listing city in Hong Kong as media companies line-up to submit applications for permission to list on the territory's Growth Enterprise Market (GEM). At the head of the line is Star TV's China-focused joint venture service, the four-year-old Phoenix Satellite Television Company Limited. The company is believed to be looking at a June date, and plans to raise about US\$129 million for a 15 percent public offering. This gives Phoenix, which is 45-percent owned by News Corp, a valuation of up to US\$900 million. The satellite platform declines to issue an official statement on the IPO at



鳳凰衛視

presstime.

Second in line is Hong Kong broadcaster, Television Broadcasts Ltd (TVB), which will list its TVB.com internet arm and Galaxy Satellite Broadcasting satellite platform. The listed vehicle, NewCo, includes the Shaw Brothers film library, recently acquired by Malaysian tycoon Ananda Krishnan's East Asia Filmed Entertainment for US\$62 million.

Bypassing the GEM, Hong Kong-based internet company, Asiaincontent.com Ltd,



If everyone else is looking to the money, Wharf Holdings Ltd subsidiary, Wharf Communications Ltd, seems increasingly likely to have to lay some out



plans to list on the US Nasdaq. asiaincontent.com develops Asian websites for international broadcasters, including MTV and Fashion TV. A registration statement is filed with the US Securities and Exchange Commission in connection with the proposed offering of 5,800,000 shares of Class A common stock in an initial public offering. Asiaincontent.com expects to sell the shares at an estimated

range of US\$14-US\$16.

News Corp, meanwhile, plans to list its combined satellite interests in a July flotation worth US\$50 billion, according to UK reports. Sunday newspaper, *The Mail on Sunday*, lists Yahoo Inc, Microsoft, Nokia and France's Vivendi, as potential strategic partners in the new company, provisionally called Platco. The company includes News Corp's 100-percent owned Star TV, along with its stakes in British platform, BskyB, Australia's Foxtel and Sky Latin America.

If everyone else is looking to the money, Wharf Holdings Ltd subsidiary, Wharf Communications Ltd, seems increasingly likely to have to lay some out. Wharf says it plans to appeal a US court decision in early May that will force the cable network to fork out US\$186 million in compensation, damages and interest to the Denver-based UnitedGlobalCom Inc. The new verdict confirms a 1997 jury verdict. The original judgment against Wharf for fraud, breach of fiduciary duty, breach of contract and negligent misrepresentation was for US\$67 million in compensatory damages and US\$58.5 million in punitive damages. The legal battle arose from UnitedGlobalCom's 1992 claim that it had been offered an option to purchase a 10-percent equity interest in Wharf's cable TV franchise in Hong Kong. Wharf denies the claim.

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INDIA

THE good news is that News Corporation spent US\$100 million in India in 10 weeks on internet start-ups, convergence businesses and broadcasting partnerships.

The bad news (at least for those who have borne witness to regulatory dilly-dallying for years now over simple broadcasting) is that regulators in India are now looking to a framework for convergence.

And the hero is US consulting company, Arthur Andersen, which gives glowing predictions for India's future as Asia's entertainment hub in its report, *The Indian Entertainment — Strategy and Vision*. The reason, the report says, is India's technical and creative talent and its huge internal market. The report says production revenues will increase from US\$300 million to US\$2.2 billion in five years, while TV software exports will rise from US\$81 million to US\$1.36 billion by

2005. Adspend will be slower, rising from today's US\$1.4 billion to US\$1.86 billion in 2005. Of this, TV's share will be 36 percent or around US\$502 million.

On the acquisitions trail, southern network, AsiaNet, is valued at US\$90 million in the Zee deal, while Hinduja-owned cable TV network, IndusInd Media & Communications (IMC), is valued at US\$1.57 billion following the acquisition of a 49-percent stake in Hinduja Finance subsidiary, Grant Investrade, by Intel Corporation's venture capital arm, Intel Capital. The investment hikes Intel's stake in IMC from 3.5 percent to 6.7 percent. The Hinduja group says this will increase IMC's equity base from US\$13.95 million to US\$14.41 million. The deal also includes an Intel option to increase its holding to 20 percent. The Hinduja Group has been consolidating its media businesses under the Hinduja Finance banner.

Doordarshan (DD), meanwhile, declares itself the most watched service in the country with 7.9 million viewers in January this year and revenues of US\$140 million in 1999-2000. DD revenues are expected to rise to US\$149 million in the 2000-2001 financial year. The broadcaster also announces the launch of four regional services in the next few months.



JAPAN

CS ADVERTISING council, CAB-Japan, says advertising revenue on member channels passed the US\$93 million mark in fiscal 1999 for the first time. Ad revenue on the 22 CS channels operated by CAB-Japan members totaled US\$95 million in fiscal 1999, for a 24-percent gain compared with the previous fiscal year. According to CAB-Japan, advertisers are increasingly aware of the cost-benefits of advertising on niche market CS channels.

A joint government/broadcaster committee, meanwhile, recommends government subsidies to smooth the transition from analogue to digital. The subsidies vary from US\$52 million to US\$91 million. NHK and the commercial networks will roll out digital terrestrial broadcasts from 2003 to 2006. Estimates are that about 2.46 million households will have to buy new equipment at a cost of about US\$820 million.

On the mergers front, Sony is close to

completing talks to acquire a stake in Japan's largest network, Fuji TV, according to local reports. Sony's aim is to grab major market share of the new digital terrestrial interactive broadcast services set for a 2003 launch. The two companies are already partners in SkyPerfecTV and Sony has taken a stake in BS Fuji, the digital BS service Fuji TV plans to launch this December. The target agreement date is mid-May. In the 1999 fiscal year, ending March 31, 2000, Fuji's sales totaled US\$3.8 billion and profit amounted to US\$315 million.



In the roller coaster new
economy, anything can
happen... including drawing
SingTel into an even bigger
consortium with which to
conquer Asia



The merger moment, however, undoubtedly belongs to Titus Communications and Jupiter Telecom, Japan's two largest cable companies.

The pair plan to merge, possibly in July. The two companies operate 28 cable stations serving 660,000 subscribers. The merger aims to carve out a major share of Japan's growing market for cable internet and telephony services, while offering stronger competition to telecoms giant NTT.

The merger also offers Titus' new majority owner, Microsoft, and Jupiter backer, AT&T, a wider entry point into the Japanese telecommunications and broadcasting markets. Other leading shareholders of the two cable companies are Sumitomo, Itochu and Toshiba. The new company, Jupiter Telecom, launches with a combined capital of US\$702.5 million.

MACAU

MACAU Cable TV Co plans a 40-channel digital service for July. The consortium behind the service, which includes Portugal Telecom with a 45-percent stake and terrestrial broadcaster Teledifusao de Macau with 15 percent, says it will spend about US\$51.4 million on technology for the roll out. The consortium is still seeking a buyer for a 30-percent stake in the company.

The former Portuguese enclave, handed back to China in December last year, has fewer than 500,000 residents.



SINGAPORE

THE 80-percent government owned Singapore Telecom's (SingTel) on-again-off-again bid for Cable & Wireless' 54-percent stake in C&W HKT keeps the region's media guessing. In mid-February, despite a US\$1-billion-sweetener from News Corp, the deal goes to Richard Li's Pacific Century Cyberworks (PCCW).

The shock drop in PCCW's stock price in April gives rise to all kinds of doom-and-gloom speculation, and with the value of PCCW's shares plummeting, SingTel looks set to enter the bidding again. By mid-May, none of the rumours come to pass, and the telco, weighed down by an acquisition defeat to Hutchison Whampoa (another Li-owned company) in Malaysia, is said to be in retreat.

However, as has already been made clear in the roller-coaster new economy, anything can happen. And that includes drawing SingTel into an even bigger, more powerful consortium with which to conquer the region.

As the volume turns up on all kinds of interactive and convergent activity, regular broadcasters make progress of their own. Discovery Communications-BBC joint venture channel Animal Planet splits its Asia-Pacific feed into four — India, Australia/New Zealand, South East Asia and China, and Taiwan.

In Taiwan, the 24-hour service is 100-percent language customised with Mandarin subtitles. In China, Animal Planet programmes are dubbed in Mandarin and offered under the Discovery umbrella. Local programming is planned for India and Australia/New Zealand.

SOUTH KOREA

A PART from the new internet frenzy, the satellite sector makes headlines of its own. News Corp's Star TV launches its bid for a slice of South Korea's direct-to-home (DTH) satellite television pie. The consortium, provisionally entitled Korea Satellite Broadcasting Corporation, also includes Dacom Satellite Multimedia System (DSM) and SK Telecom.

Shopping channels get their own 15 minutes of fame. Korea's second largest cable home shopping channel, 39 Shopping, invests US\$3.2 million for a 10-percent stake in two cable system operators in Korea's southern region. The shopping network last year bought 93 percent of Korea Telecom Cable TV and plans to buy three more system operators this year.

Almost at the same time, 39 Shopping merges with cable programme provider Cheiljedang, which operates a drama cable channel and a music cable channel. Cheiljedang, which has applied for government permission to launch two new channels for fashion and cooking, says it will use 39 Shopping to take on rival LG Shopping.

Yahoo Korea, meanwhile, launches a massive investment drive, including pumping funds into sports cable channel, Korea Sport TV.

The amount of the sports TV investment is not disclosed, but there's no doubting their cheques are good. The company is said to have a US\$60 million war chest from its US-based parent, Yahoo USA. Yahoo Korea is expected to announce further deals soon.

Korea's third largest home shopping company, TV Home Mart, launches a trial home shopping channel in Japan on April 9, with a full launch planned for June 1. The Ace service will be offered with SkyPerfectTV's affiliate, Chubun. TV Home Mart's investment is Y120 million (US\$1.2 million), which comprises 70 percent of the total paid-in capital. TV Home Mart expects sales of US\$45 million this year, three times higher than last year's.



TAIWAN

RICHARD Li's Hong Kong-listed Pacific Century Cyberworks (PCCW) signs joint venture agreements with two of Taiwan's most powerful television/internet players, Taiwanese film/TV production house, ERA Communi-



cations Co Ltd, and broadband access provider, the Koos Group's GigaMedia Limited.

Financial terms of the deal, which will provide content and distribution for Li's broadband Network of the World (NOW) platform, were not disclosed. PCCW plans to spend US\$1.5 billion on internet content in the next five years.

ERA, which has been involved in movies such as *City of Sadness* and *Raise the Red Lantern*, produces about 3,500 hours of original TV content a year. It is unclear how much of its TV library is available to the PCCW joint venture. The Koos Group controls one of Taiwan's two dominant multi-system cable TV operators.

PCCW and GigaMedia might acquire ERA shares worth US\$50 million each as part of the joint venture agreement. PCCW holds 55 percent of the venture. ERA, GigaMedia and the Koos Group hold a combined 45 percent. The venture will produce Chinese internet content, branded ERA.com and distributed through PCCW's NOW and GigaMedia's GigaNet broadband platforms. A second joint venture between the three Taiwanese partners will be formed to distribute the content globally.

The joint venture for content development and high-speed distribution comes as PCCW gears up for a mid-year launch of its NOW platform.

In yet another deal, PCCW and Pacific Century Insurance Holdings Ltd (PCI) contribute about US\$12 million to a 50:1-49.9 joint venture with the US-based investment information provider, Morn-

ingstar Inc, to provide investment information for internet sites outside Japan and South Korea. The new joint-venture is called Morningstar Asia.

PCCW and Hong Kong broadcaster, Commercial Radio Productions Ltd, launch PCC Skyhorse Holdings Ltd. PCCW unit, PCC Investments Ltd, owns 60 percent of the venture and Commercial Radio holds the remaining 40 percent. The agreement involves exclusive use of Commercial Radio content.

PCCW's latest deals also include stakes in Indian portal Rediff.com and audio technology company Beatnik.



THAILAND

THAI satellite and telecommunications company, Shin Corp, considers an alliance with ailing broadcast network, Independent Television (ITV). The move could add content to Shin Corp's internet development plans, and is welcomed in Bangkok as a step towards a convergent future. Shin Corp's management infrastructure and skills are also seen as an asset to ITV, which is heavily in debt. According to some reports, the network owes about US\$107.5 million. Shin Corp was one of the original partners in the satellite TV platform that became United Broadcasting Corp (UBC). The company offloaded its 13.9 percent UBC stake to TelecomAsia early last year for about US\$13 million.

UBC, meanwhile, starts talking about break-even by next year ahead of looming competition from new operator, World TV. The company unveils a provincial expansion push to improve its exposure outside of the capital. Almost 80 percent of UBC's approximately 335,000 subscribers are in Bangkok. World TV takes over the pay-TV licence of the Wattachak Group's defunct Thai Sky TV, and unveils plans to have a 24-channel service by mid-2001.

UBC also registers an increase in registered share capital to 940,773,570 with the Stock Exchange of Thailand. The company currently has 740,773,570 shares in issue. Deputy chief financial officer, Basil Sgourdos, says the company has not finalised what portion of the additional share capital will be issued in a fund raising exercise. Some of the funds raised will be used to launch an interactive service. A detailed strategy and business plan is still being worked out. ☐

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Korea's webcasters are presenting cable and terrestrial networks with their greatest challenge yet, says Hordon Kim

IN TWO to three years, if current forecasts get it right, webcasting services in South Korea will be offering more and to a larger audience than the traditional terrestrial networks. Even if they hadn't suspected it until now — and all indications are that they have, indeed, taken note of the challenge — the country's Big Three are being forced to learn some painful lessons by nimble start-ups eager to ride on the country's burgeoning broadband highway. And the moral of this cyber-story wasn't only hammered home with the widespread popularity of web-delivered coverage of the April 26 historic Korea-Japan friendship soccer game.

According to monthly web guide magazine, *Simmani Life*, there are some 400 webcasters operating in South Korea today. The Korea Internet Broadcasting Association puts the number of sites at the beginning of 1999 at just 50, and the number of viewers at around one million. This is substantially up on the 500,000 viewers recorded in September 1999.

Industry predictions are that the number of webcasting sites will rise to more than 1,000 by year-end and, *Simmani Life* says, webcasting services will surpass the terrestrial segment in two to three years.

Survey results from local company, Research & Research, show webcasting will dominate South Korea's 21st century broadcasting segment. The report says 40 percent of broadcasting specialists, 68.5 percent of the general public and 78.8 percent of netizens selected webcasting as the most powerful medium against terrestrial (24 percent, 14 percent and 7.1 percent), satellite (21 percent, 8.4 percent and 9.4 percent) and cable/relay channels (9 percent, 7.9 percent and 3.6 percent). Younger audiences (81 percent of people in their 20s), high-income group (86.5 percent of people making US\$3,000 per month) and students (78.1 percent) topped the list of viewers who favoured the web over traditional channels.

According to statistics from local company, Cast Service, as many as 5,000 webcasting channels were available in

Korea in April. There are seven search engines specialising in internet broadcasting services only. For content, music prevails with the largest share of 64.5 percent, followed by cinema (9.7 percent) and entertainment (8.3 percent). For webcasting services, paid viewing still remains at three percent.

The emergence of value-added, pay-per-view webcasting sites is being driven by golf, cinema and foreign-language content. Cheol-kyun Kim, online service team manager at ultra-high-speed access provider Dreamline, predicts a boom in electronic money-based viewing systems as the webcasting business enters into a stable growth period.

The success of internet broadcasting services has led terrestrial networks to beef up their efforts. Indeed, some say it is the broadcasters themselves, with their cash, content and brand equity, who will turbo-charge webcasting. KBS, MBC and SBS have all embarked on new strategies for the age of streaming. These generally include an e-commerce component along with webcasting and various content development initiatives.

The country's largest terrestrial, KBS, has set up a venture with Korea Telecom (KT) for internet broadcasts. The Won14-billion (US\$12.6 million) Crezio.com (www.crezio.co.kr), launched as a stand-alone joint venture in April, has an average daily view of five million pages and has its focus firmly on webstreaming. The service, 34 percent owned by KT and 36 percent by KBS, is available on five local websites and is distributed via KT's KoreaSat-3 satellite, which covers Japan and China, and via ADSL networks. A separate narrowband service is available. Crezio.com plans to increase the number of webcasting channels to 20 in the next few months.

Crezio launches into a fiercely competitive market. MBC's revamped site (www.IMBC.com), launched in April with an initial Won10-billion (US\$9 million), is promising live webcasting, video-on-demand, programme guides and other

services. At the end of February, MBC's daily page views exceeded five million.

Third terrestrial, SBS, has also revamped its internet presence with a new version of SBSi. The site claims to have passed the 26 million page view mark, and is working on alliances with companies such as Samsung Corp and Lycos Korea for new portals and shopping services.

English-only webcasting will be launched in May by Samsung Corp in conjunction with satellite channel, Arirang TV. Named *A Gateway to Korea*, the portal aims to showcase Korea's culture, tourism, business and national policies. The partners will work with webcaster Doobob, which is planning a 10-channel service with music, games, cinema and chat rooms, among others.

In yet another webcast move, Hansol.com and Cast Service are developing a wired/wireless internet TV broadcasting service. A Japanese internet drama is included in its first phase of service. This will, eventually, be followed by wireless voice/visual webcasting.

The burgeoning webcasting business accompanies a spate of other screen-based ventures, mergers and acquisitions among telcos, satellite and cable operations and internet start-ups. Cable channel Art & Cinema has, for instance, joined a KT-led consortium to launch three satellite channels. Art & Cinema plans to open a webcasting site in May or June.

Agreements are also flowing for value-added services. Hyundai Corp, for one, has tied up with cable music channel, KMTV, to provide programming and other content for satellite services. The pair will launch a music broadcasting site before the end of June.

All this content creation activity runs parallel to some of Asia's largest broadband hardware and infrastructure projects by, among others, the country's powerful telcos. As traditional broadcasters have already discovered, if they aren't on top of the new technology, they will be buried under it. And they don't seem about to let that happen. ☎

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lhariharan@hallnetwork.com.sg

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Virtual reality



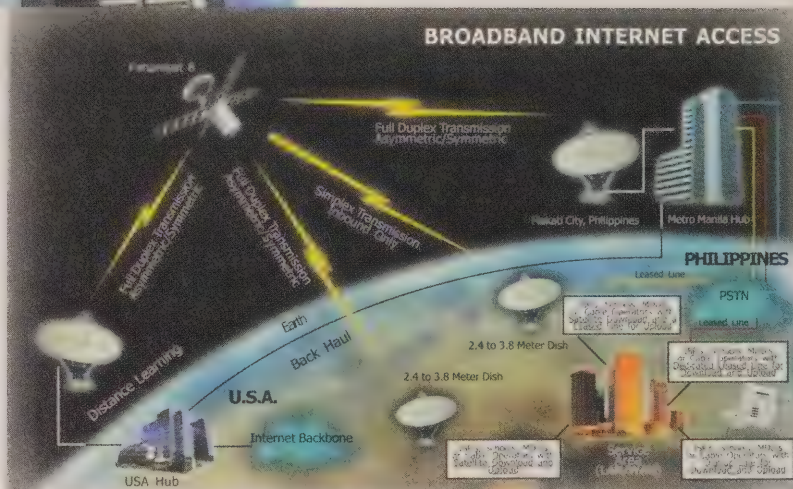
Mel Velarde's reality puts broadband well within the reach of the average cable guy. His new venture also promises to dig the Philippines out of its dire educational straits

MEL Velarde looks deeply into cable operators' eyes and breathes the magic words: "broadband" and "e-commerce". If at another hour or on another day he will be wearing his internet-education hat, today he's selling his "broadband on demand" platform, a business that promises to turn the common-or-garden variety of cable operator into a high-speed wonder in less than 45 days and with minimal outlay.

"The question," he says, "is not whether you choose to be part of convergence or ignore it, but rather, 'given where I am and where my market is, what should my convergence strategy be'." And then there is this rallying cry: "You are no longer a cable TV operator, but an e-commerce network gatekeeper." And the crowd, gathered at a seminar to hear all about how they can get in on the new economy action, laps it all up.

There's little argument that the sales pitch works as cable operators across the region figure out how to deliver the kind of high-speed internet access that has so far been the sole preserve of the market's biggest and most deep-pocketed players. In the first week of April, three months after his soft launch, the Manila-based Velarde signed up four cable operators in the Philippines, his first target market. One of his new clients is Philippines Cable TV Association president, Elpi Paras. Another 20 deals, Velarde claimed at the time, were in negotiation. About 150 corporations are using an average of 512 Kbit/s of his capacity along with 15 ISPs.

Velarde's latest vehicle is One Virtual Corporation, which uses four transponders on PanAmSat's PAS-8 satellite to deliver high-speed capacity over Asia. One Virtual is 51-percent owned by the Velarde family holding company, and 49-percent by US-backed educational consortium, the Fund for the Assistance to



Private Education/ECC Education Capital Corporation. One Virtual has raised US\$25 million so far and the company is valued at US\$50 million. Twenty percent of the equity is on offer and the plan is to go for an IPO by 2002, Velarde says.

The One Virtual platform offers what he calls "a complete e2e [end-to-end] system" — headend, satellite, design infrastructure to make the system two-way, plus upgrade financing and training. For billing and conditional access, he has signed a deal with Mindport/IBS.

Upfront costs for an E1 connection are US\$23,000 a month with one month in advance and a one month deposit, plus a one-off US\$3,000 fee. Velarde says it will cost the average consumer about Ps500 (US\$12.50) a month for 30-60 hours of internet access. Cable, in comparison, costs between Ps300-Ps500 (US\$7.50-US\$12.50).

Velarde has built his business plan on predictions of 3.4 million internet users in the Philippines, up from the current 300,000, and the relatively low number of ISPs. By April, there were about 222 ISPs. "It should be thousands," he insists. Velarde estimates the average middle-

upper income household has about Ps4,025 (US\$101) to spend on a combination of cable TV (Ps275; US\$7), domestic long distance telephony (Ps1,000; US\$25), regular telephony (Ps250; US\$7), entertainment (Ps2,000; US\$50) and the internet (Ps500; US\$12.50).

Internet users are predominantly 19-34 years old. Sixty-nine percent access the internet at home, 27 percent from their offices and 50 percent spend more than one hour a day online.

Catering to an even younger demographic, One Virtual will install computer laboratories and satellite-delivered internet services in 3,000 Fund for the Assistance to Private Education schools. Content creation, such as his free e-preschool.com, will be done with local education groups in conjunction with Velarde's other venture, the Wizard Academy.

In the Philippines, he explains, "only 400,000 aged 0-6 go to school out of 10 million kids. Our primary and secondary kids fail in maths and science; we rank 39 out of 43 countries. By 2010 we want to be in the top 10. At the end of the day technology has to serve a noble purpose".

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Alien

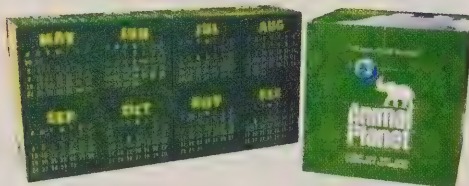
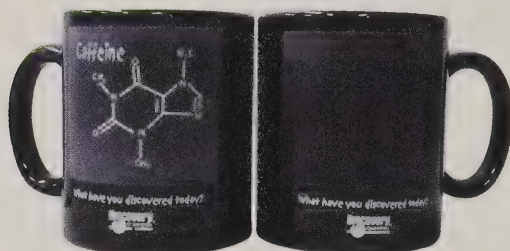
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Marketing team

Animal Planet

Calendar cube

... because it is fun and quirky, and can be appreciated, used and enjoyed by the whole family

Stuffed animal

... because it is an ambassador from Animal Planet

Frog-shaped soap

... because they represent the general entertainment network: good, clean fun for the whole family



Christina Chia

CNBC Asia, vice president, marketing

Pen sets, key rings, caps and leather folders

... because they are useful and a great way to brand CNBC Asia with its target markets



Stephanie David

ESPN STAR Sports, director of marketing

ESPN cap

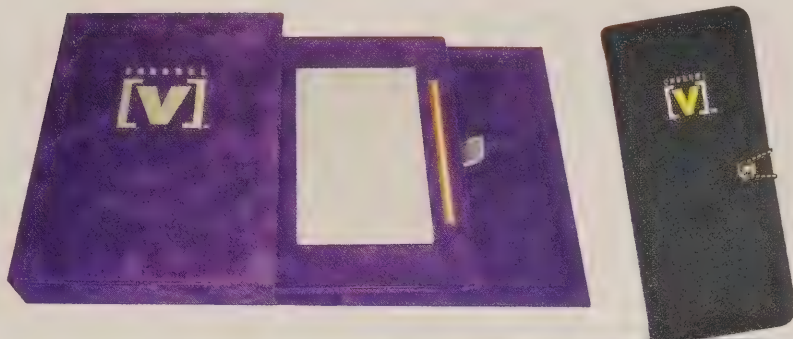
... because it is protection against the elements

STAR sports backpack

... because it can store all your essentials

ESPN water bottle

... because it holds fluids to replenish one's body



Vicki Lam

Channel [V], assistant promotions manager

Black rubber messenger bag

... because it is ultra cool

Nylon business card holder

... because we live in a world where a business card is very important

Bridge playing card sets

... because Bridge is increasingly popular in China and around the region



Marketing team

MTV Asia

Tattoos

... because in a hundred years, people will marvel at our fascination with body art

MTV Fantastic Females CD

... because music is at the core of MTV's business, and *Fantastic Females* is our best-selling album to date

Watch

... because the watch will be a thing of the past in 2100 as by then, it'll probably be embedded in our clothes or even our body



Christine Leo-McKerrow

Nickelodeon Global Network Ventures, director, marketing and communications

The Brainball

... because it's quirky and hours of fun

Splat keyring

... because it's a squelching, moving logo and it's a fave with everyone

Trade show munchies

... because food — especially orange-coloured food — is much more fun than baseball caps



Caroline Wong

HBO Asia, marketing manager

Annual Diary

... because this is a signature premium from HBO Asia every year

5th Anniversary T-shirts

... because they commemorate HBO Asia's 5th anniversary in Asia

Crystal Globe

... because this commemorated HBO Asia's grand opening in 1992

Marketing team

CNN International

Mug

... because you always need a mug

Worldtime clock with calendar

... because it keeps track of the time and date

"Credit card" tool kit

... because tool kits are always essential

HIGH-wire acts

ADSL may be God's gift to telephone companies competing in a high-speed world. But cable operators don't necessarily need to be nervous. Broadband Asia's step-by-step guide to ADSL looks at what it is, how it works and why every telco worth its copper wire is getting so excited

IN THE faster-than-thou stakes, ADSL is the speed of light to cable modem's speed of sound. What is Asia choosing? Both. Who's winning? While cable modem services are being rolled out rapidly across the region and ADSL is the topic *du jour* among every telco from Telstra to the Telephone Organisation of Thailand, the race between the two technologies — if, indeed, it is a race rather than another increasingly viable option for high-speed video and data delivery — has only just begun.

Should cable operators be nervous of the looming might of telco-driven entertainment services? "Yes," says Grant Lusty, Cisco Systems Asia Pacific broadband access product marketing manager.

"No," says Nortel Networks' director for broadband access in Asia, Ed Everett. At least not in terms of broadcast television. "For TV broadcasts, their threat to cable ops will be minimal," he says. The main entertainment media via ADSL will be video-on-demand or store-and-play applications for the next year or two.

Lusty adds that ADSL "represents both an opportunity and a threat". With telcos planning video services with DSL technologies, cable operators' core business will be directly impacted. However, high-speed data services, offered more cost effectively via HFC networks and cable modems, allow them to fight back. "Cable operators also potentially have a more viable technology for data/video integration," Lusty says.

The video issue, according to some, is less likely to be the heavy artillery it could be between telcos and cable operators. "Video will become prevalent on the internet, but not in the form of broadcast TV," says Nortel Network's Everett. "It will be video for commercials, teleconferencing and for service announcements."

Both quicker than anything delivered in the dial-up world, the bottom line for both technologies, Lusty adds, "is that the speed and performance of the service depends on how the operator deploys and configures it".

That vapourises what is probably the most common myth of high-speed access technologies — that ADSL bandwidth is not shared and the cable modem's is.

And here's why: ADSL is only point-to-point between the customer's modem and the telco's central office DSLAM (or digital subscriber line access multiplexer). The DSLAM generally has one link into the core network, and this link is shared by hundreds of users. The core of the network will also be shared by thousands of users.

Cable modems use a shared access technology at the physical layer, but the higher level protocol (DOCSIS, or Data Over Cable Service Interface Specification) enables bandwidth to be allocated and controlled to each modem. The Cable Modem Termination Systems (CMTS) that act as the "multiplexers" can also be deployed in many parts of the cable operator's HFC network, effectively multiplying the amount of bandwidth available.

This all but effectively removes the "I'm faster than you and that's what counts at cyber rush hour" argument that has driven subscriber choices.

So, what else do marketers of these new turbo-charged systems have to

work on? Both services are "always on", which takes that little pleasure out of any bells-and-whistles campaigns to attract consumer speed freaks away from dial-up narrowband services. And, with either technology, users can use their telephone lines to chat away to their pals while surfing the net.

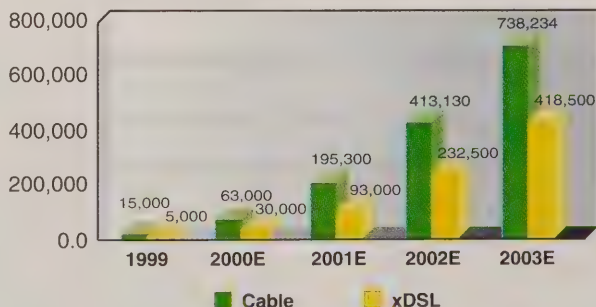
The biggest hurdles telcos face in signing up high-speed data subscribers are education and understanding. "Most people don't know what ADSL is," Lusty says. Hitting the right price point is another issue, along with keeping up with demand once the service takes off and keeping installation costs low.

Ultimately, the two technologies could carve the markets up evenly. "Everything we see says that the market will be split 50-50," says Everett. "The key influence there is how creative will service providers be in bundling services."

Essentially, what it comes down to once all the operational details have been sorted out is less about technology than about services. "This is basically a marketing and service offering issue more than a technical issue," say Alcatel's Asia-based heads, Etienne Charlier and Edgard Baekelmans. "Fast presence in certain areas and the offering of the

Taiwan Market Situation

Taiwan Cable Modem/ xDSL Subscribers



Source: IDC

operator in terms of added value services will determine the success of one of these two technologies," they add.

Overall forecasts for Asia Pacific growth include China overtaking Japan as the region's largest telecommunications market by 2003. Overall, the telecoms market is expected to grow by 40 percent from 1999-2003, according to Alcatel, and internet growth rates are predicted to explode to 375 million users by 2005.

Much in line with the rest of the world, ADSL's primary application in Asia is high-speed internet access. Unlike the US, where the majority of xDSL deployment has been by alternate carriers, in Asia it is the incumbents who are leading the way.

Again unlike the US and Europe, Singapore and Hong Kong have already moved into commercial video-on-demand services, which is the second of roughly four main applications for ADSL, rather than just internet access. The other two are tele-working and leased line replacement for, for example, branch office connections, according to Cisco's Lusty. Where Asia differs most significantly from the US is in tele-working, which has not really caught on here yet.

Forecasts for Asia's ADSL lines vary. According to Cisco's estimates, Asia has around 150,000 to 200,000 ADSL lines. This is, however, growing rapidly with aggressive plans from Hong Kong's Cable & Wireless HKT, Chunghwa Telecom in Taiwan and Korea Telecom in South Korea, Lusty says. Forecasts for year-end 2000 are approximately 500,000-750,000, with between one and two million by year end 2001.

Alcatel China Limited's ADSL line figures are 330,000 to 350,000 at the end of 1999, with deployment in Hong Kong and Korea fuelling expected high growth. "If you take into account the announced deployment from Korea, Hong Kong, and Taiwan, you can already identify more than four million lines for 2000," Alcatel says. "Obviously with such figures, it is difficult to estimate the real size of the installed base by end 2000. The only thing we can really say is that we will experience an exponential growth."

Cisco draws on current pricing structures to conclude that ADSL subscribers in Asia will pay, on average, about the same as subscribers in the US, who pay between US\$30 and US\$50 a month. For example, subscribers to Singapore Telecom's service pay between US\$35-US\$70 a month, while C&W HKT

charges about US\$30 a month. In South Korea, Korea Telecom's charges are roughly US\$44 and in Taiwan, Chunghwa Telecom's prices are around US\$30 a month.

Future pricing policies and strategies in Asia are also expected to follow the US model. "Pricing policies come in many flavours," say Alcatel's Charlier and Baeckelmans. These are usually segmented by application and type of users. Entry-level users will, typically, start with a limited speed of, say 500 Kbit/s for a relatively low price and upgrade to faster services — at higher prices — as needed.

Nortel Networks also expects residential users to start low and inch up. Residential users, Everett says, are looking for higher speed internet access at this point, while corporate users are looking for a total managed network solution that includes ATM switching capability and firewalls, among other features. "As residential users become more sophisticated, they will also want these attributes," Everett says.

In terms of sheer market size, Japan leads the way. Nippon Telegraph and Telephone Corporation (NTT) completed field tests from February to December 1998, with a pilot service launched in the fourth quarter 1999. NTT anticipates its trial will last for one year.

South Korea is also a strong force fuelling the ADSL boom, with all three telcos — Korea Telecom, SK Telecom, and Hanaro — well into their ADSL strategies. Hanaro Telecom, established in 1997 specifically to offer 21st century multimedia services, launched its commercial service in April 1999, and now has more than 300,000 subscribers in Seoul and other major cities across the country.

Nortel Networks, which entered the ADSL market through its acquisition of Silicon Valley ADSL/DSLAM start-up Promatry at the end of last year, expects South Korea to have more ADSL lines than any other country in the world by the end of this year, according to Everett. As for the rest of the region, "we will definitely see the market ramping up in the second half of this year," he says.

Australia is also among the regional leaders, with dominant state-owned telecommunications company, Telstra Corporation Limited, committing to spending A\$1 billion (US\$586 million) a year for three years to upgrade the national copper network with ADSL technology. Telstra will roll out its

commercial service from August 2000.

The service will have a range of packages, which will be unveiled closer to the launch date, according to Telstra's general manager for data and IP products, Denis Mullane. Trials are currently being conducted to integrate ADSL into Telstra's billing system; the trial is offered at 1.5 Mbits/s download speed with 256 Kbit/s upload link and costs business customers a flat rate of A\$130 (US\$76) a month.

Along with the retail trial, Telstra is also conducting a wholesale ADSL trial for service providers to offer broadband access to their end customers. By mid-2000, Telstra anticipates that 90 percent of Australian businesses and households will be able to access broadband services via ADSL.

Telstra expects ADSL to be used most widely in small business for high-speed internet access, interactive media, collaborative computing, video conferencing and distance learning, and other high-speed services such as tele-working, virtual private networks, extranets and intranets.

The Australian market is expected to be turbo charged towards the end of this year as emerging carriers and alternate operators gain access to Telstra's copper loops, Nortel Networks' Everett says.

Despite their relatively tiny number of households, in the delivery of ADSL services, Hong Kong's dominant telco, C&W HKT, and Singapore's state-owned Singapore Telecom are up ahead.

C&W HKT entered commercial service in 1998 with the launch of its broadband Netvigator service. Netvigator delivers internet access as well as an interactive iTV platform, with video-on-demand, music-on-demand and games-on demand. The ADSL network covers 1.9 million households or 95 percent of Hong Kong's homes.

In Singapore, technical trials began way back in 1996, with a commercial service running since November 1997. Although Singapore's national wired strategy has put it in the lead on almost every technological front, the island state's broadband providers have discovered that its subscribers are ultra-picky when it comes to delivering on speed promises. While the shift from a pure connection play into the realm of service and customer satisfaction may be a sign of Singapore's progress, it may also press local authorities into breaking new ground in setting down minimum access speeds.

Singapore Telecom's Magix platform,

Country	Company	Trials or Commercial Deployment	Name of service	Launched in	Number of subscribers
Australia	Telstra	Trials	Big Pond Advance	September 1999, expanded in April 2000	1,000
Hong Kong	C&W HKT	Commercial	Netvigator Broadband	May 1998	77,000 (end March 2000)
Japan	NTT East & NTT West	Trials	ADSL Internet Access	December 1999, Service Trial completion set for December 2000	N/A
Malaysia	Telekom Malaysia	Trials		1998, completed early 2000	60
Singapore	Singapore Telecommunications	Commercial	Magix	Nov 15, 1997	26,000
South Korea	Hanaro Telecom	Commercial	ADSL Pro and ADSL Lite	Pro launched in April 1999, Lite launched in August 1999	338,291
South Korea	Korea Telecom	Commercial	KORNET ADSL	June 1999	53,000 (end March 2000)
Taiwan	Chunghwa Telcom	Commercial	HINET ADSL	August 1999	10,000 (end March 2000)
Thailand	Telephone Organisation of Thailand and United Communication Industry	Commercial	United Broadband Technology	October 1999	N/A

Data researched and compiled by Mansha Daswani

promises internet access speeds of up to 512 Kbit/s along with the "no shared bandwidth" promise. According to local observers, these standards could be around half Magix's 512 Kbit/s and about a third of the 1.5 Mbit/s promised by cable modem platform, Singapore Cable Vision.

These are not issues with which China is expected to grapple anytime soon. On a pure technology front, however, the mainland is no laggard when it comes to being on the ADSL fast track. ADSL technology has been installed by telecom-

munications authorities in Fujian, Jiangsu and Heilongjiang, among others.

As far back as 1996, Alcatel installed its first ADSL lines in Shanghai for Shanghai Post and Telecommunications (PTA). In July 1999, following three years of trials, Alcatel was awarded Shanghai PTA's contract for a range of ADSL products to be used as part of the Shanghai Hotline, which is a key component of the Shanghai Infoport project. The plan is to offer local subscribers a range of multimedia services, including internet surfing

and video-on-demand.

The Guangdong PTA in Southern China has deployed Alcatel's ADSL solutions since 1998, and said 50,000 lines was its end-1999 target. The service area of Alcatel's contract covers all operators in Guangdong, which has a population of 80 million and is one of China's wealthiest areas. Among other services, Guangdong PTA is aiming for video and distance learning along with high-speed internet access.

To drive its Asia-Pacific business,

Services provided	Prices	Modem supplier	Households passed by ADSL network	Additional information
1.5 Mbit/s download speed, 256 Kbit/s upload, interactive video projects	A\$130 (US\$76)	Alcatel	90 percent of Australia's seven million households by 2002	Commercial roll out targeted for August 2000
ITV (VOD), internet speeds up to 1.5 Mbit/s	Free installation Mass Access: HK\$198/month (US\$25) (20-hours)/ HK\$298/month (US\$38) (100-hours) Additional usage: HK\$2 (US\$0.26)/hour Business Access: HK\$298/month (US\$38) (30-hours) Additional usage: HK\$4 (US\$0.51)/hour "Always-On" Business Broadband Access Service: HK\$3,800 (US\$488); HK\$6,800 (US\$874)	Alcatel, ECI & Cisco	95 percent (about 1.9 million households)	
512 Kbit/s downstream, 224 Kbit/s upstream	Monthly fee: Y5100 (US\$46); Y6,700 (US\$61) Installation: Y19,300 (US\$178); Y16,800 (US\$155)	N/A	N/A	Areas: Tokyo, Osaka, Oita Prefecture
internet access	M\$130/(US\$35)month	N/A	40,000	Commercial services set for this year
Feature films, TV serials, music videos, news, sports, entertainment news, educational programmes, games-on-demand 512K Ethernet 512K ATM	SuperSurf: Free installation One-time activation fee: S\$30 S\$35 (13 hours) (US\$20) S\$60 (30 hours) (US\$35) S\$120 (60 hours) (US\$69) Additional charges: S\$0.05/minute (US\$0.03) Premium: Assisted installation: S\$50 (US\$29) S\$35 (10 hours) S\$60 (20 hours) S\$120 (60 hours)	Alcatel, Efficient Networks and Aztech	Majority of the 900,000 households in Singapore	
VOD, internet service, homepage space, phone service	Installation Fee Won 80,000 (US\$72) Monthly Usage: Won 29,000 (US\$26) + Won 45 (US\$0.04)/3min	3Com	2,554,000	Targets 1.53 million users by year-end
Multimedia data, VOD internet speeds: upstream 64Kbit/s-640Kbit/s downstream 1.544Mbit/s-8Mbit/s	Won 40,000 (US\$36)/month Installation: Won 30,000 (US\$27)	Alcatel	N/A	Available in Seoul and six other cities. Korea-wide after 2000
Internet access	Unlimited use: NT\$2,100 (US\$68)/month 8 hours: NT\$299 (US\$8)/month + NT\$0.6 (US\$0.20)/ additional min 16 hours: NT\$499 (US\$16)/month + NT\$0.5 (US\$0.16)/ additional min 32 hours: NT\$799 (US\$26) + NT\$0.4 (US\$0.16)/additional min	Arescom, Nokia	N/A	Target 300,000 subscribers by year-end
128 Kbit/s upstream 128Kbit/s downstream	BizConnect: Registration Baht 2,000 (US\$53) Monthly rates: Baht 3,100 (US\$82); Baht 4,800 (US\$128); Baht 5,300 (US\$141) HomeConnect: Baht 500 (US\$13)/month	Nokia, LG	300,000	Available in Bangkok and selected business areas

Sources: Telstra, C&W HKT, NTT East, Singapore Telecommunications, Hanaro Telecom, Korea Telecom, UBT, Telekom Malaysia, Hinet

Alcatel in January 2000 announced it would "cluster" its 10,000 people in Asia Pacific into one region, headquartered in Shanghai. "We expect strong growth in Asia Pacific over the next three to five years," says Alcatel chairman and CEO, Serge Tchuruk. "We see China's demand for telecommunications and internet service stimulating dynamic growth in the region."

With sales of more than one million ADSL lines worldwide, Alcatel claims to be a global leader, accounting for 49 percent

of the DSLAM market and 33 percent of the ADSL modem market. The US market accounts for almost 80 percent of sales, with Asia at 15 percent, well ahead of Europe's five percent.

Across the straits, in Taiwan, the state-owned Chunghwa Telecom buys ADSL technology from Lucent Technologies, Nokia and Cisco, which conducted the initial deployment last year. At the time, the project claimed to be the largest ADSL network in the region.

If Taiwan has chosen the multi-supplier

approach, India lays claim to the region's greatest contradiction. As China's largest regional rival with a population of one billion and a thriving info-tech industry, India stretches from the most backward to the most developed on the spectrum of ADSL development. On one hand, Bangalore is the Silicon Valley of Asia, and a hotbed of ADSL technology development. On the other hand, locals consider themselves blessed if they can pick up the phone and be sure they'll get a dialing tone.

ADSL 101

PUT most simply, in the words of Australian telco Telstra, ADSL (asymmetric digital subscriber line) is a modern technology that transforms ordinary (copper wire) phone lines into digital lines for advanced high-speed internet access that is always online.

ADSL equipment generally comprises a broadband access server and a DSL Access Multiplexer (DSLAM). At the customer end, there is a line splitter, which provides separate sockets for the digital and the voice services, and an ADSL modem, which plugs into the digital port on the splitter and is then plugged into the consumer's PC, TV or digital set-top box.

The idea of sending video over telephone companies' twisted pair lines is a little more than 10 years old. The original concept was to transmit video-on-demand and data at speeds of more than one million bits per second over ordinary twisted pair telephone lines. At the same time, modems could be created to send information asymmetrically over short distances with downstream data rates of up to 1.5 Mbit/s and upstream rates of 16 or 64 Kbit/s.

Seven years later, downstream speeds have improved to 8 Mbit/s over very short

distances while upstream speeds have migrated to around 640 Kbit/s. ADSL has also been joined by other digital subscriber variants, with the term xDSL now used to cover a range of DSL technologies, including ADSL, SDSL, HDSL, RADSL and VDSL. Although ADSL is still the most common DSL technology for residential and SME application, symmetric DSL technologies are gaining favour for business applications where higher upstream data rates are needed. VDSL (Very High Speed DSL) for example, will have the potential to offer 13Mb symmetrically (or 25Mb downstream and 3Mb asymmetric mode) once the standard is finalised — expected to happen later this year — and equipment is widely available. VDSL is now expected to double these performance figures, according to Cisco Systems' Lusty.

Another common ADSL variant is G-Lite. Developed initially as a lower cost variant of full rate ADSL, it only offers up to 1.5 Mbit/s downstream and was initially seen as a more viable, less-costly business alternative. However, the reduced cost of silicon for full rate ADSL means that the price difference between the two is no longer large, leaving, some say, a question mark over G-Lite's future. There has been a move towards equipment that

can straddle the different ADSL technologies. All major vendors are now offering DSLAM able to deploy both G-Lite and full range ADSL and multi-standard, multi-mode ADSL modems that can automatically switch between the different technologies.

On the operator side, there are unresolved compatibility issues that have prevented consumers from buying ADSL equipment on the open market. "There is still work that needs to be done," says Cisco's DSL product manager for Europe, Paul Gainham.

Although all ADSL operators adhere to the industry standard DMT Issue 2 specification, different operators have different interpretations of the standard, depending on whose chips they use.

Progress is being made in some quarters. The Israel-based ADSL technology manufacturer, Orckit Communications, claims to be making some advances in solving compatibility problems.

Despite competing with each other, DSL techniques have one common element — they all provide dedicated, point-to-point public network access over twisted-pair copper wire on the local loop (last mile) between a network service provider's central office and the customer premises equipment. — Chris Price

One Indian company caught on the hi-tech side of the divide is Silicon Automation Systems Limited (SAS), which has been involved in broadband access solutions since 1995, and designs develops and markets xDSL technologies. Part of SAS's mission statement is to: "evangelize broadband access and make it a reality". SAS' range of xDSL technologies is marketed under the Synapse brand — Synapse G.Lite, Synapse HostG.Lite and Synapse G.dmt — and provides solutions for the "last mile" bandwidth bottleneck.

If there has, in the past, been any reluctance on the part of telcos to deploy ADSL technology, it has been the high cost of building the infrastructure and the viability of the technology. Until last year, the cost per ADSL subscriber averaged US\$1,500. The falling cost of silicon means modem and server costs are now much lower, while installation is becoming more simple. The focus has also shifted from video to high-speed internet access, which is much less expensive to provide.

The next biggest concern, according to Cisco's Lusty, is service cannibalisation. "Telcos make a very healthy living out of leased line and transmission-type services

and now they are offering much higher bandwidth at a fraction of the cost," he says. ADSL can cost less than 10 percent of a dedicated leased line.

Telcos, Alcatel says, have to decide on ADSL positioning in relation to their ISDN and leased line business. In the US, for instance, ISPs typically promote the DSL service as much as the telcos "because they are the natural internet provider to users and consequently high-speed internet service can easily be marketed as an upgrade".

Other concerns while rolling out ADSL are the geographical coverage of the roll out so that a maximum number of subscribers can be reached and an equal speed offered to all. ADSL performance, says Alcatel, is dependent on distance with performance decreasing after three to four kilometres.

Interoperability is another issue, as are installation manpower and resources. "This is the basic idea behind G.Lite, a lower speed but simpler system that allows users to connect modems themselves, without a technician," Alcatel adds.

While the technology debates rage and

roll-outs gather speed, all operators show signs of a common realisation — the importance of content.

Early thinking of video-on-demand as the killer ADSL application fell flat in the face of its transition as a medium for high-speed data technology for internet access. This was caused primarily by the boom in the US PC market, coupled with the initial poor quality of video over ADSL lines. "There was a false dawn for ADSL," says Cisco Europe's Gainham. "Everyone thought that VOD was going to be the killer application for ADSL, but the cost of cameras, licensing and broadcasting rights made it an unrealistic business proposition for most operators."

A new dawn is, however, on the horizon. Ultimately, consumer marketers say, it's not the technology but the content that will drive broadband take-up. "Once people are connected, there will be little emphasis on the access technology and more on the services provided," says Telstra's Mullane. "Whether people are connected via ADSL, cable or satellite will make little difference to their online experience." It's a truth with which the cable and satellite television world is more than familiar. ☺



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Games set and watch

Olympics organisers have their eye too firmly on the terrestrial revenue ball to play with the internet. Billions of TV viewers may, nevertheless, get more of an eyeful than they bargained for, says Liz Fell

WEBSTREAMING — or convergence at the very least — is the topic *du jour* among every broadcaster, telco, programme maker, rights holder, mother-in-law with internet start-up ambitions... how will the Sydney Olympics be handled on the web?

Well, it won't in any ground-breaking way, shape or form. In just one of a string of controversial rulings that inevitably accompany the games every four years, the group running this year's biggest show on earth has declared that the official website cannot offer live video or audio coverage of events. The reason being given by the International Olympic Committee (IOC) is the protection of TV/radio rights holders and sponsors.

The consolation prize, according to officials connected with the organisers, is consistent with the current state of the web, although critics could call it consistent with the organisers' understanding of new technology and their ability to stomach change.

More sympathetic views put it down, quite simply, to the rights holders, "who are concerned about placing a value on their products and possibly underpricing themselves... they just don't know how to price interactive rights," according to one sports broadcast executive.

That may well be, but it has not stopped Hong Kong's First Son and broadband mover and shaker, Richard Li, chief executive of the Pacific Century Group, from pushing the internet rights envelope. Organisers of the Paralympics, which follow the Olympics in October, have also streaked ahead, with live internet broadcasts through the We Media website (www.wemedia.com).

Although Li appears to be staying away from the Olympics for the moment, his big events are Wimbledon and Indian cricket. Li plans to broadcast Wimbledon tennis tournament highlights on the internet this year as a first step towards full, live coverage of the event on his new Network of the World (NOW) platform.

Although the amounts he is paying have not been disclosed, industry sources say rights holders are rubbing their hands in glee at the prospects of significant fees from internet ventures. "We could bypass the television networks," Ian Edwards, TV marketing director of the All England Lawn Tennis Club, was quoted in the UK as saying. Although no official confirmation has been issued, an agreement is believed to have been reached in principle for Li and the tennis body to launch an internet service.

In yet another ahead-of-its-time deal for

Picture courtesy Telstra



the internet age, Li is also rumoured to have paid US\$45 million for cricket rights in India. Although the amount has not been officially confirmed, PCCW is not the least bit coy about its "strategic acquisition of key media rights" for international cricket played in India to 2004. The exclusive deal with state-owned broadcaster, Doordarshan, involves PCCW building, maintaining and operating the official Indian cricket website. In addition to in-depth statistics and information, the site will carry full audio and video streaming of all live matches as well as more than 1,200 hours of library footage.

Buying up internet sports rights is not a foregone conclusion for all broadcasters with sports agendas. Singapore-



based satellite sports-caster, ESPN Star Sports (ESS), says its strategy to make use of internet rights is still in progress. No timetable has been set. "It's a logical extension for brands and it is something we want to become involved in," says outgoing ESS president Sandy Brown.

Meanwhile, the Asia Pacific Broadcast Union (ABU), which negotiates sports rights for Asian members, is gearing up to grapple with key "what is an internet right" questions. The ABU has Olympic rights for the games until 2008 and represents about 26 Asian countries (excluding Japan, South Korea, New Zealand, Australia, the Philippines and Taiwan).

For this year, the ABU has willingly

agreed to fall in line with the IOC in not exploiting internet rights, according to Patrick Furlong, the ABU's senior officer, sports. "There are a lot of legal issues to go through on this one," he adds.

"As far as the events we deal with, we would be quite happy for there to be no exploitation," Furlong continues. "Web broadcasting is difficult to deal with. There are no boundaries... there are ways for internet delivery to be complementary. I think broadcasters should think about getting together with companies that specialise in developing sports websites. The information you could put out is fantastic."

IBM, exclusive Olympics IT supplier,

clearly agrees. An official explains that "not all TV broadcasts will go live to air, so the website will be the only entertainment medium providing results of each event within seconds of the finish". IBM will operate server farms in high-traffic countries, such as the US, to deliver on its exclusive deal as IT supplier. And that is the best sports fans can hope for from the wired future for the 16 days of the 2000 Sydney Olympics.

Despite this and other outcries, the IOC is adamant that the future not disturb the present. And they're holding off dealing with the convergence and new economy issues until the next Olympics at least.

Dr Ian Reinecke, chief information

SYDNEY TV RIGHTS REVENUES

COUNTRY	NETWORK/ UNION/POOL	FEE (US\$MILLIONS)
USA	NBC	705
JAPAN	Japan Pool	135
LATIN AMERICA	Latin/Sth America	12
EUROPE	EBU	350
AUSTRALIA	Seven	45
CANADA	CBC	28
NEW ZEALAND	TVNZ	10
PHILIPPINES	PTNI	1.6
ASIA	ABU	12
TAIWAN	CTSP	3
ARAB STATES	ASBU	4.5
AFRICA	URTNA	12
TOTAL		\$1,318.10

SOURCE: IOC

officer at the Olympic Coordination Authority and head of the IT and Telecoms coordinating group, argues that technology convergence hasn't generated "much of a problem" for the Sydney Olympics. Athens, he admits, may be different. "Will there be more interaction with the TV or over the internet in 2004? Athens will be fascinating as a test bed for these technologies," Reinecke adds.

Perhaps for the last time, the politics of rights to air the Olympics Games fall squarely on the side of those old economy television movers and shakers — terrestrial broadcasters. Revenue from the sale of television rights to free-to-air broadcasters is the lifeblood of the Olympic Games. This year's rights fees total US\$1.3 billion.

With the future out of the way, all focus is on making sure the 25 billion people who tune in this year get the picture, including the one of skimpily clad players bouncing around the beach playing volleyball. If neither residents of Sydney's iconic Bondi Beach nor players appreciate this *Baywatch* moment designed to show off the city's best assets, crews with handheld and crane-supported cameras are expected to be frantically practising their zoom skills.

With an expected 3.5-billion strong global television audience for the opening ceremony alone, organisers have gone to some trouble to maximise Sydney's other visual assets — primarily a spectacular harbour, complete with trademark Opera House and bridge. A new triathlon event, for instance, will feature a swim in the harbour next to the Opera House, a run through the Botanic Gardens along the harbour fore-

shore, and cycling through the main city streets.

The so-called "beauty shots" traditionally provided as fillers for TV rights holders have not been revealed yet by the Sydney Olympics Broadcasting Organisation (SOBO), the host broadcasting organisation headed by chief executive, Manolo Romero, the IOC's TV adviser. Still, SOBO insiders last year were bragging about the challenge of propping cameras on the top of the harbour bridge, on the roof of the Opera House and on the torch in Olympic Park at Homebush Bay, looking east to the bridge and Opera House about 15 kilometres away.

SOBO's mission is to produce "3,200 hours of live, visually stunning and technically superior coverage" of the games as a service for about 180 broadcasters. To assist in this mammoth production, SOBO has contracted rights holders with their own specialist crews to provide the vision and background sound for many of the events. Japan's NHK, for instance, will produce SOBO's feed of the gymnastics and TV New Zealand will shoot the softball and the sailing. More affluent networks such as the US' NBC — the IOC's most generous rights holder — will produce its own visuals for selected events.

Another major challenge for SOBO is to secure enough interference-free RF spectrum for all the mobile facilities: RF links for cameras on helicopters, boats and bikes; wireless microphones for commentary; and transportable satellite antennae. NBC has talked about using five helicopters, while TVNZ expects 22 broadcasters will want their own commentary positions to cover the sailing.

Expensive space on the inner city harbour foreshores is in high demand.

GlobeCast/Newsforce has leased an apartment to generate beauty shots and backdrops for visiting non-rights broadcasters. US satellite operator, PanAmSat, plans to transform its plush harbourside offices into a studio with panoramic views. The Broadcast Base 2000 partners (Octagon CSI, GlobeCast, and Global Television/All Media Sports, the local producers that won the host broadcasting contract for October's Paralympics) will offer production facilities and satellite uplink services from a former casino at Darling Harbour, the Olympic venue for wrestling, boxing, volleyball, judo and weight lifting.

Controversy always hounds the Olympics, and this year's best have ranged from discriminatory ticketing and budget blowouts to a US marching band contract and the refusal by netball team members to take off their clothes for a promotional calendar. IOC media strategist, Franklin Servan-Schreiber, has blamed Australia's "in-your face" style of reporting for the spread of these local controversies to international media — more futuristic fallout from the global village and communications with which the bureaucratic and secretive IOC, cry as it might, is being forced to deal.

"The really sad thing is that, for a lot of the public, the joy has gone out of the Games," Olympic Minister, Michael Knight, told *The New York Times* in February. Knight faces the formidable task of protecting the exclusive rights and brands of the IOC broadcasters and sponsors that have contributed in cash and/or in kind. The IOC in late April vetoed a plan by his Olympic Coordination Authority to ban non-rights holders, including CNN and ESPN, from entering the so-called Olympic precinct or "fence". According to one official, this notional "fence" extends to the Olympic Village for the athletes, the Olympic Park where about half the events will be held, the city streets for the marathon and the harbour for the sailing. The IOC's compromise solution allows accredited non-rights broadcasters from other countries to share eight daily passes inside the fence to produce no more than two minutes of non-live sports reports three times a day.

SOBO has set August 15 as the opening date for its International Broadcast Centre (IBC) currently under construction in Olympic Park. While rights holders are entitled to free vision and background sound for every event, those wanting to mix the SOBO feed

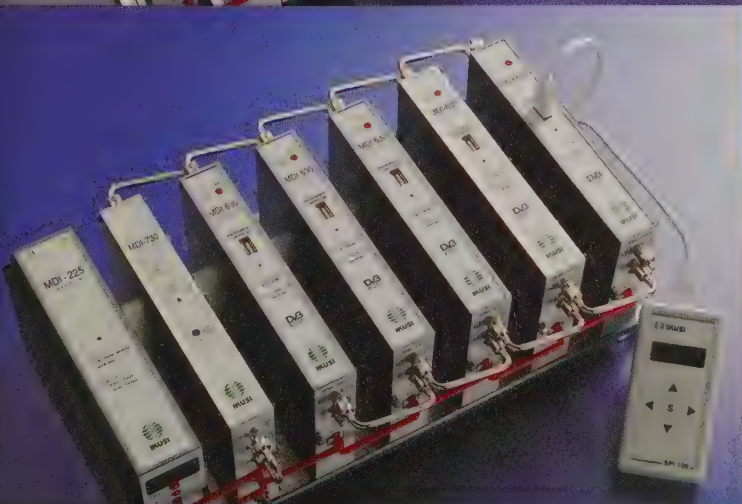
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SDI	16, 32, 64	47 - 550	≥ 38
	128, 256 QAM	470 - 860	
MDI	16, 32, 64	122 - 242	≥ 36
	128, 256 QAM	242 - 458	
		458 - 858	
SDA	AM VSB	47 - 550 470 - 860	≥ 60

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with their own on-the-spot coverage and/or commentary must lease "unilateral" space and production facilities at the IBC and/or venues. A confidential SOBO rate card quotes IBC space at A\$885 (US\$494) per square metre; a commentary position with a remote-control camera at A\$22,500 (US\$12,576) per venue; and a dedicated video and audio service between venues and the IBC in either analogue PAL or SDI (Serial Digital Interface) ranges from A\$8,500 (US\$4,751) to A\$41,300 (US\$23,085).

Only rights holders and Telstra, as the exclusive telecoms provider, can access the IBC dish farm at Olympic Park where much of the international coverage will be uplinked to satellites operated by Intelsat, PanAmSat, Hong Kong-based AsiaSat and possibly Malaysia's Measat. TVNZ's Satellite Services unit has won the contract to service the ABU through its leased Intelsat capacity, while Hong Kong's dominant commercial broadcaster, Television Broadcasts Ltd (TVB) and China's state-owned China Central Television (CCTV), among others, have been talking with Telstra about delivery of their own separate feeds.

Telstra, an Intelsat shareholder, guaranteed last year to pay Intelsat "the full end-to-end cost for a substantial amount" of available space on both Pacific and Indian Ocean satellites. Telstra has also inked partnership deals with BT Broadcast Services, GlobeCast/Newsforce, Japan Telecom and several US companies to supply fixed, flyaway and other transportable antennae, as well as hardware such as encoders and modulators for its digital satellite platform.

TVNZ and the ABU will, for the first time, provide a concurrent digitally compressed eight-channel satellite service. In the past, the ABU produced a single integrated multi-lateral transmission. This service favoured sports in which ABU members had an interest but offered limited access to simultaneous live events. The new system will allow members a vast increase in event choice and coverage, which will in turn allow more opportunities for market customisation. TVNZ has signed a deal worth more than US\$1.6 million with Tandberg Television for the digital satellite compression, transmission and management solutions for the Olympic project.

The combined costs of all this equipment has not been totalled. But it's clear that, even without the internet, their dishes are already overflowing. 

Australia is gearing up for Olympics overkill as broadcasters begin mining sponsorship and programming opportunities everywhere from news bulletins to soap-opera story lines

AFTER paying US\$45 million for the exclusive rights to broadcast the Sydney Olympics, the Seven Network is under pressure to distribute its games programming on as many platforms as possible. The company's strategy is to telecast about 23 hours of games programming each day on its free commercial TV network, offer Olympic highlights on its C7 Sport subscription channel, and create two temporary 24-hour Olympic channels for subscribers equipped with either PC or TV set-top boxes.

Harold Anderson, Seven's director of sport and the Olympics, has designed the free-TV schedule to focus on live coverage and highlights of events where local athletes may win medals. In addition, one subscription channel will offer full coverage of long-form sports, and the other will focus on sports such as soccer that are of particular interest to Australian viewers from other national backgrounds. The rights acquired by Seven do not extend to the Australia Television satellite channel offered across Asia.

Even though Seven's i7 internet unit has sealed an agreement to stream the Olympic channels to PC subscribers using the satellite-based IP technology of a small start-up firm, the network has so far failed to negotiate a distribution agreement with the powerful pay-TV operators.

The obstacles to completing a pay-TV deal include both access and price. C7 Sport is supplied only to C&W Optus and Austar, but Seven really wants to reach the 600,000 homes signed up by Telstra/Foxtel. Backed by the competition regulator, the network last year mounted a legal challenge to Foxtel's exclusive supply arrangement with Telstra, but this is still winding its way through the courts. Meanwhile, insiders say negotiations with Main Event, a pay-per-view supplier, have broken down because Seven demanded a high, flat-rate price. Main Event (formerly Content Co) is owned jointly by the three main pay-TV operators.

No advertising will be carried on the two Olympic channels, but the free-TV coverage will feature plenty of commercials as well as sponsored highlights and athlete profiles. To supplement its casual ad spots, Seven has created eight "partnership" packages at A\$13.9 million (US\$7.8 million) each, and 10 "sponsor" packs at A\$7.6 million (US\$4.2 million) each. These packages, and the network's own promotional efforts to win viewers from the leading Nine Network, are already trickling through the TV schedule.

Viewers tuned into Seven's prime time evening slots are told that promotional segments such as *Olympic World* or *Magic Moments* are delivered courtesy of McDonald's or Visa, and high-flying local athletes pop up regularly in news bullets. The network is even transforming its local drama into a promotional vehicle. In return for a cash prize of A\$5,000 (US\$2,794), viewers have been invited to "spot the star" who grabbed a can of Coca-Cola from the fridge during the evening soap, *Home and Away*, and a lead character in the high rating police drama, *Blue Heelers*, has revealed he once dreamed of "winning the marathon"! More drama scripts with story lines focusing on the Olympic torch relay are tipped to surface closer to the Games. — Liz Fell

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With regional economic recovery boosting numbers and new technologies driving interest and investment, more than 250 exhibitors and 800 companies are expected at this year's 6th BroadcastAsia 2000 (held with CommunicAsia2000) in Singapore from June 6-9. It's not rocket science to suggest that the talking points will be all about who can do what digitally in the new economy and how fast. We polled a few of the players on what they're showing and how much they expect from this year's event

IN ITS first Asian outing since the merger with Silicon Valley's Harmonic (www.harmonicinc.com), the former Divicom will be waving the new company flag that, according to Asia-Pacific managing director, Richard Chua, is now in a better position to offer digital headend and networking solutions to system operators to deliver video, voice and data over cable, satellite, telco and other wireless networks. "We are taking the opportunity at the show to launch our new company, Harmonic," he says. Among the highlights at the Harmonics stand will be the latest MPEG Transrater, which won the Editor's Pick at this year's NAB. The transrater allows operators to do post production (including ad insertion) in the compressed domain, rather than converting the signal to the uncompressed domain first. Harmonics is also providing the encoding and multiplexing solution for the DVB-T joint-presentation with the Television Corporation of Singapore.

NEWS Corp's digital solutions operation, NDS, cuts the ribbon on its BroadcastAsia stand this year with great relief at the end of the economic downturn and high expectations that the Year-of-the-Dragon optimism, new systems, and Asian roll outs of interactive technology will translate into mega-business, says Sue Taylor, NDS Asia Pacific Ltd's vice president. NDS' mission at the show is to parade technology options to Asian operators as they explore new services. This year's show serves another purpose: to showcase

NDS' solutions for Chinese-language broadcasting. The range includes an interactive programme guide jointly developed with China's state-owned broadcaster, China Central Television, and a Chinese conditional access system, developed with the Academy of Broadcasting Sciences.

Keep an eye out for the NDS MediaStorm, a broadband multicasting system, and Microsoft TV/NDS Solution, which facilitates the creation and deployment of enhanced TV services. NDS will use a Pace set-top box to demonstrate the system at the show.

Bring the NDS ad found in this issue to the NDS booth for a chance to win a prize: a converged mouse-telephone.

THE end of the economic crisis has spelled increased demand for, among other products, Orad Hi-Tec Systems' virtual studios, according to Ariel Kor, marketing director for the Israel-based company. Orad is expecting more visitors than last year to pass through its stand at BroadcastAsia 2000, and the company says the Asian market offers the greatest growth potential. What to watch out for on the Orad stand is the CYBERSET-NT, a real-time 3D Windows NT virtual set solution, and the CyberSport and IMAcGINE systems for the enhancement of sports broadcasting and virtual advertising.

TANDBERG Television, which bought NDS' hardware business last year, says its strong relationships with key Asian broad-

casters makes its presence at Broadcast Asia a must. "It is," says Sue Gilks, Asia-Pacific business partner and development manager, "a perfect opportunity to introduce new product lines, and give Asian broadcasters the means to harness the potential the digital broadcasting industry holds". Stand highlights include the Evolution 5000 broadcast range, E5500 Digital Satellite News Gathering Encoder (DSNG), the 2RU Digital ENG system, and the E5100, combining MPEG-2 encoding and COFDM Modulation.

AUSTRALIAN telecommunications giant, Telstra, will be talking about its new strategic priorities to anyone who will listen at this year's CommunicAsia2000. This follows the early May announcement of key business unit consolidation with the aim of "becoming a globally significant, modern, successful communications company". Words such as innovative, relevant, timely and cost effective will flow as the company, which boasts everything from ADSL and HFC to satellite and digital wireless networks, outlines its path into the new economy. Booth highlights are the range of e-commerce solutions and interactive applications.

THE UK-based NTL will be using BroadcastAsia 2000 to trumpet its complete range of communications services (design, construction, integration and operation of digital and interactive transmission systems, plus global satellite services) for Asia's broadcast/media industry. 

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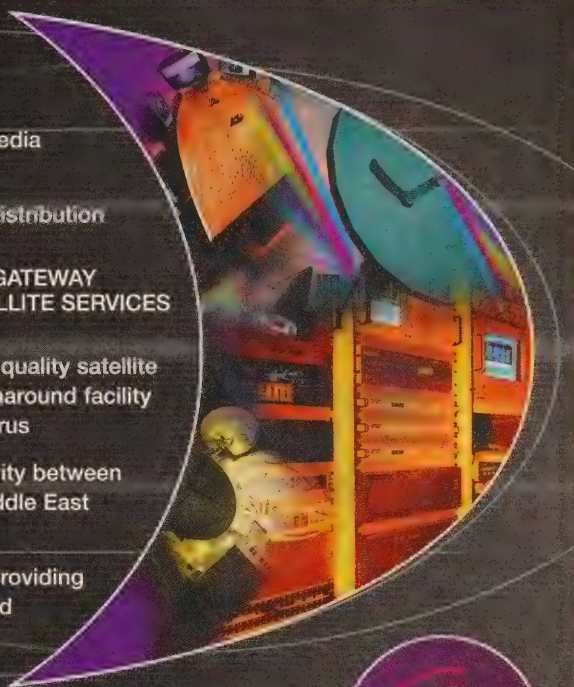


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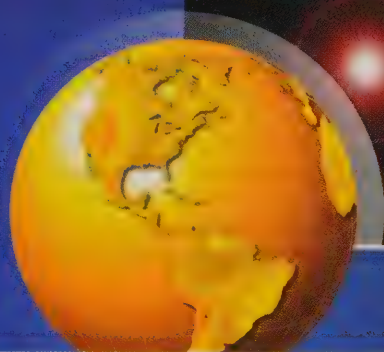
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Connecting The World

hot wired

Singapore may be the world's most wired nation. It is also home to some of the fussiest speed freaks. Janine Stein outlines the price of being so high up the technology learning curve

IN MANY senses, Singapore is a victim of its own success. Encouraged by the state into believing in their absolute right to mega-fast connections and state-of-the-art technology, citizens of the world's most wired nation get angry and feel cheated when their broadband internet access is slower than it could be.

In a region where millions still see running water as a privilege and private telephone ownership as a delicious luxury, Singapore authorities' and operators' latest damage control exercise was explaining to its broadband users why their cable modem internet access wasn't exactly the promised 25 times the speed of their dial-ups. The irony was that, for a while and despite some of the best technology in the world, operators didn't appear to know what was causing the

bottlenecks.

The finger pointing went something like this: local gateway StarHub Internet, which supplies monopoly cable operator, Singapore Cable Vision (SCV), with bandwidth, said SCV was responsible for its own woes. Initially, it also appeared that the regulatory body, the Infocomm Development Authority (IDA), blamed SCV, which seemed to have underestimated — and undercatered for — the high peak-hour demand. The IDA at first said the link between StarHub Internet and SingTel Internet Exchange was almost full during peak hours. But, the IDA added, technically SCV was not accountable for slow access before March 3 because it hadn't fully leased the link before then.

SCV was fierce in its insistence that it had increased its per-customer bandwidth

provisions by more than four times since December 1999. And it also said it would look at additional bandwidth suppliers.

The bickering went on. Until someone obviously told them all to zip it up, and Singapore's info-tech authorities, SCV and StarHub Internet kissed, made-up and, perhaps most importantly for Singapore's image, banded together to present something of a united front.

In a public statement, the IDA said its mid-April open letter, published in *The Straits Times*, was meant to clarify the slow overseas access issue, which it said was due to bandwidth capacity and routing arrangements. At no time did the IDA mean to imply that this was SCV's fault, the statement insisted. StarHub Internet said it agreed with the IDA and with SCV that establishing the cause of the bottleneck was a "complex issue". The internet, the company said, is a "complex aggregation of network hardware, connected by many gateways, and establishing the true cause of the internet bottleneck will never be easy".

Meanwhile, Singapore Telecom's Magix service was also coming under fire for slower-than-expected service, prompting the platform to post a notice on its website warning irate customers not to shout or curse "or we will not serve you". Magix's ADSL-based service has about 26,000 customers. SCV's cable modem service, in comparison, trails with around 8,000 subscribers. Magix promises speeds of up to 512 Kbit/s.

Plagued as they may be with speed issues — some early adopters dubbed Magix's service "tragix" — both platforms are well ahead in seeking and adopting new services.

Magix, for instance, has tied up with Israel's Extent Technologies to offer an Application Service Provider (ASP) hosting service. This will allow Magix to deliver software — business productivity programmes, entertainment, education, training applications, games, among others — over its broadband network in a click-and-play service that means users don't have to download anything onto their PCs. More than 100 educational CD-ROMs are immediately available on the service.

SCV, on the other hand, has been given permission to launch a cable telephony service, its third after cable TV and cable modem services. The platform, which has about 224,000 cable TV subscribers, says it plans to spend US\$29.3 million equipping its network for telephony. The new services will operate on the US\$292.7

million island-wide SingaporeONE broadband network. Voice-over-IP trials will launch in the third quarter 2000, with the full commercial roll-out dependent on the speed at which the new DOCSIS 1.1 technology products become available.

SCV, which uses analogue boxes and is yet to unveil a timetable for the switch to digital set-tops, is also planning internet TV trials for later this year, although it still appears uncertain about public appetites for TV-based web surfing. The service will be tested among 3,000 households that are already cable TV subscribers. Four hundred SCV employees have already received the Motorola set-top boxes in an advance trial.

Although they have been accused of micro-regulating, the island state's authorities, too, are ahead of the regional pack.

Amid talk of fines and penalties for broadband service providers who fail to fulfill speed promises, officials have ensured Singapore's status as the region's most advanced techno-hub remains untarnished. If anything, the promised revision of service quality guidelines and the notion of imposing minimum access speeds (as opposed to minimum standards that govern, for instance, the amount of time the network can be down) bolsters the island-state's reputation as a determined info-tech leader.

The Singapore Broadcasting Authority has just awarded five temporary digital terrestrial TV licences, aiming to fast track the research and development process as well as test interactive television applications and high-definition programming. Singapore has been conducting various other DTV trials and services since 1998 and has adopted the European Digital Video Broadcasting DVB-T standard. Licensees include the Television Corporation of Singapore, cinema operator and film distributor Cathay Organisation, and health content provider HealthAnswers.

Long-running rival, Hong Kong, however, appears to have regained some of the lead it lost to Singapore in the satellite broadcast arena; many internet start-ups say Hong Kong's talent pool and creative energy is luring back the intellectual capital that moved away when the majority of satellite broadcasters, attracted by friendly business terms and clean air, chose Singapore as their base.

While official numbers on who's operating where and whose wired headcount is higher don't appear to exist, there is little doubt that Singapore plans to regulate — and spend — its way into keeping the lead.

The Singapore government has set aside about US\$88 million to boost the interactive broadband multimedia industry and to double SingaporeONE broadband network subscribers from the current 100,000 to 200,000 by year end, according to local reports. Most of the money will be poured into infrastructure and equipment. This is part of the island-state's Infocomm 21 Masterplan, spearheaded by communications and information technology minister, Yeo Cheow Tong. The ultimate goal is to generate revenues of S\$40 billion (US\$23 billion) a year from the infocomms industry in five years time.

The government has also had a hand in setting up other IT-friendly projects, such as a broadband-enabled industrial park that opened in April this year. e-biz hub@Chai Chee is a joint venture between DBS Land and 1-Net Singapore, which operates SingaporeONE. The idea is to jump-start IT projects with low network charges. Park inhabitants pay about US\$3,800 for 45 Mbit/s internet access, which is about half SingTel's US\$7,400 charge for a similar service.

Despite its plan to lay off staff as part of an organisation-wide restructure, Singapore's state-owned MediaCorp, which owns all TV and radio stations, is also eager to take part in the new economy buzz.

MediaCorp, which is driving the launch of the niche terrestrial channel bundle, has established a S\$100-million (US\$59 million) technology fund to boost the island-state's internet position. The fund announcement coincided with the launch of MediaCorp's www.eastciti.com, which is being billed as Asia's first broadband content site. The fund will be managed by MediaCorp subsidiary, MediaCorp Interactive. MediaCorp Interactive has also signed content ventures with auction/classifieds site, surfingbananas.com, and online yellow pages, thegreenbook.com, for co-branded websites.

If Singapore has the facilities to display broadband content to its best advantage, content creators based in the island state are well aware that they cannot ignore narrowband if they want regional exposure. UTV Interactive's former shootingstars.com (renamed sharkstream.com at the beginning of this year after registration problems) will be 70 percent narrowband and 30 percent broadband. UTV Interactive, which is aiming to launch a multichannel audio- and video-streaming service in the next few months, is a subsidiary of Ronnie Screwvala's produc-

tion company, UTV International.

"We can't afford to only play the broadband game," says sharkstream.com's Sudhanshu Sarronwala. At least not until broadband rolls out across more of the region, he adds. Sharkstream.com, which plans net-specific short-form "sharkbites" programming, is looking for subscription revenues towards the end of this year.

While they may have taken a back seat to all the techno-buzz sweeping the island state, Singapore's "old economy" TV broadcasters are plugging away at expanding their traditional audiences.

Perhaps the most ambitious plans belong to dedicated news service, Channel NewsAsia, which has embarked on a regional expansion drive. The one-year-old service, operated by MediaCorp News, will launch its regional beam in September and has set aside US\$100-US\$150 million over five years for the initiative. In contrast to its strong Asia-for-Asians attitude, the news channel is also well aware that it needs more than Asian roots to survive, and has called upon the image expertise of UK-based brand builders, English + Pockett.

Even with its determination to push an Asian agenda, Channel NewsAsia insists it is a commercial venture and not part of a TV-audience colonisation drive. It is yet to be seen how the rest of the region, including India which has a vibrant free press and numerous independent news services, responds to this government-owned satellite TV service.

Given Singapore's proven ability to stay ahead of the technology pack, perhaps the biggest question is not how the country will maintain its lead, but whether it will fiddle with the closely held ownership issues and the stringent vote against direct-broadcast satellite signals. The government is already reviewing the media structure, and says it will make its decisions known by year end.

Talk is of competition on the pay-TV front, along with the admission of another free-TV operator. Although no terms and conditions have been disclosed, any new operators are, however, unlikely to be freed of the "nation building" responsibilities of existing media. There's also little chance that any control will pass into the hands of non-Singaporeans.

There is another issue on which there is little discussion. Singapore authorities have always had a very clear idea of what's in Singapore's best interests. And no amount of dissenting opinion — neither from home and especially not from abroad — is likely to change this. 

Money or the box

The wow factor of China's numbers are even more dazzling — not to mention much more realistic — to broadband service providers than they were to the satellite programmers and operators of old. Warburg Dillon Read's Joe Zhang and Raymond Jook look at who is likely to be most successful in China and why

THERE are three ways to access the internet in China: via telephone lines (telephone dial up, ISDN and ADSL) and two ways via cable (set-top boxes and cable modems). In the race for high-speed access technology, cable modems and ADSL are the likely winners.

Dial-up services: Most residential and commercial users still use 56 Kbit/s modems and dial-up services for internet access. The typical 56 Kbit/s modem costs less than Rmb500 (US\$57). But telephone dial-up is time consuming and servers' capacity and access to the international gateway (351 Mbit/s) are limited. Most modems still run at 33.6 Kbit/s.

ISDN: ISDN (integrated service digital network) is the second most widely used internet-access technology. ISDN services are available in Beijing, Shanghai, Nanjing and Guangzhou, among other capital cities. However, it is only available to users within 4.8 kilometres of the base station, and the costs are prohibitive. In Beijing, for instance, the connection fee is at least Rmb500 (US\$57), the cheapest terminal adapter is Rmb19,200 (US\$2,190) Plus there are the telephone charges. This has led to doubts about ISDN's future.

ADSL: Despite slow progress so far, ADSL should prevail, particularly for business use. At the moment, it is still beyond most users' reach. In Shenzhen, for example, the one-off connection fee plus modem costs amount to Rmb3,800 (US\$433), plus a monthly fee of Rmb400 (US\$45). Apart from the absence of industry standards, ADSL technology requires large investments in back-office management and billing systems, which China Telecom is not inclined to do at present.

ADSL technology launched in China in 1998, with Guangdong province first

adopting it in its 10 major cities. However, due to its high cost, the technology has only managed to attract a few thousand users in Guangdong (although the provincial Post & Telecom Administration has signed a contract with France's Alcatel to install 50,000 ADSL lines in 2000). ADSL technology is also making limited inroads in Beijing, Shanghai, Fujian, Helongjiang, Jiangsu and Zhejiang.

To combat users' concerns over high costs, G.Lite standards came into effect last year. This U-ADSL modem is much cheaper but there is a speed compromise — 1.5 Mbit/s receiving, 512 Kbit/s sending.

Set-top boxes: At present only a few thousand set-top boxes have been sold. Still, many believe TV set-top boxes are the way forward for China given cable TV's high penetration (20 percent for the country, and up to 50 percent in cities). In contrast, the penetration rate of PCs is about 12 million, or three percent.

Cable modems: Only about 10 percent of cable TV networks are of fibre or HFC structure, according to the State Administration of Radio, Film and TV. In addition, regional cable networks have yet to link fully to each other to create an integrated national system. Therefore, despite their low cost, cable modems have hardly been used. Concerns about shared bandwidth and a cable modem standard also hinder the technology's progress in China.

Many cable modem sceptics cite the experience in Australia and New Zealand as a warning against cable modems. They argue that despite billions of dollars of investments in building broadband HFC networks, consumers are still unexcited about cable modems. But the same can be said for set-top boxes. Equally, few other countries suffer the kind of bandwidth scarcity seen in China. Judging from

the official stance, we feel that cable modems are likely to be a major internet access technology in China in the future.

Quite a few cities or provinces (Shenzhen, Shanghai, Dalian, Qingdao, Nanjing, Suzhou and Guangdong) already offer high-speed internet access and interactive services (VOD, etc) via cable modems. According to Nortel Networks, there were 20,000 cable modem users in China by end-1999. This is expected to rise to 100,000 by the end of this year.

In Jiangsu province, the official plan is to have 60 percent of urban households use cable modems eventually. While the plan appears ambitious, it is a declaration of official policy and direction.

In Shenzhen, the cable bureau has started to offer high-speed internet access via cable lines. According to the Shenzhen Cable Bureau, installation is Rmb456 (US\$52) (zero for existing cable users), the modem costs Rmb4,000 (US\$456), the monthly service fee is Rmb300 (US\$34), and the receiving speed is 2-10 Mbit/s. Several other regional cable TV bureaux have started to offer interactive services.

Satellite access: At present, this method is only used in remote towns and by mining companies.

CABLE modems and ADSL look set to dominate the future of internet access.

For set-top boxes to prosper, we believe they must differentiate themselves through interactive functions. Their focus will, therefore, be on doing more cheaply what PCs can already do, but also on what PCs cannot do. This calls for the introduction of Interactive Programme Guides, or IPGs. Clearly, the government or cable TV bureaux must step in to provide this "public benefit" or encourage the private sector to offer the service.

In the US, the cable TV industry is preparing to offer first-generation IPGs. With the price of a digital, cable modem set-top box down to US\$300-350 a piece from as much as US\$7,000 four years ago, the set-top box market is set to rise sharply. Higher economies of scale as a result should encourage newer technologies and cheaper set-top boxes. In any case, even at the current price, a signifi-

cant portion of Chinese cable TV subscribers will find set-top boxes affordable, as long as they deliver fast internet access and provide interactive functions.

Telephone dial-up modems' price meanwhile has dropped from Rmb1,800 (US\$205) a piece to about Rmb500 (US\$57). Producers say their net profit market is as low as one percent. Meanwhile, the future of ADSL and of cable modems depends heavily on government policy. If the government encourages ISPs to use cable lines, cable modems will sell well. The proliferation of ADSL technology will likely depend on whether the government and the telecom bureaux are willing to invest in upgrading their switches.

GIVEN the analysis so far, how should Chinese companies position themselves for the revolution of the cable TV market?

The best strategy is to acquire cable TV networks. The second best strategy is to lease cable networks (ideally with the "last mile") for as long as possible. The third strategy is to produce ADSL equipment or cable modems. But this should be done in association with cable bureaux to secure a captive market. Failing that, there is no point becoming a pure producer of cable modems or ADSL equipment, as over-capacity is likely to occur almost as soon as users warm to these products.

The company with the best strategy is Shum Yip Investment, an investment holding and window company under the supervision of the Shenzhen Municipal City Government. The company plans to acquire a 21-percent stake of the Shenzhen Cable TV network from its parent. It may also acquire up to another 28 percent from the Shenzhen City Government, which has a 45-percent interest in the network. At present, there are some 320,000 cable TV subscribers in Shenzhen (of one million households) paying a monthly fee of Rmb15 (US\$1.70) for the basic package. We estimate subscriber growth was 70 percent and 35 percent in 1997 and 1998 respectively, and that the network made net profits of about Rmb50 million (US\$5.7 million) in 1999. The network provides value-added broadband services in addition to the basic package. These include TV shopping, securities trading (50,000 institutional investors at a monthly charge of Rmb50 or US\$5.70) and video conferencing. Foreign programmes are offered for an extra fee.

Citic Pacific, Central China and China Aerospace fall into the second best strategy tier, as do Sino-i.com and Perfect Treasure.

Citic Pacific is waiting for regulatory

Key data on the set-top box sector

Total capacity	25 million units
Total sales so far	A few thousand units
Numbers of producers	Around a dozen
Unit price	Rmb1,000-3,500

Source: SARFT, WDR

approval on the Rmb1,200 million (US\$137 million) acquisition of a Chinese optical fibre network. Negotiations are also far advanced for the acquisition of 50 percent of Guo-An for Rmb2,000 million (US\$288 million).

Central China owns a 49-percent stake in the Henan Zhongzhou Radio and TV Information Network, which comprises all major cable TV trunk networks in Henan, China's most populated province with more than 93 million people and about 24 million households. Central China, which is 21.1 percent owned by Henan Hong Kong Enterprises, paid Rmb80 million (US\$9.1 million) for the 49-percent stake. The current length of the trunk network is 1,900 kilometres. Last mile is owned by local and provincial governments. There are currently 1.5 million pay-TV customers linked to the trunk lines. The company estimates that up to 2.5 million households will be connected by end-2000 after completion of the second phase of network expansion, which will take the total length to 2,700 by end-2000. Annual revenue forecasts are Rmb50-60 million (US\$5.7-US\$6.8 million) in 2000, with profits of Rmb30-40 million (US\$3.4-US\$4.5 million). The main sources of income are a Rmb2 (US\$0.22) share on the Rmb15 (US\$1.70) basic monthly cable TV fee, government department data transmission usage fee of Rmb0.5 (US\$0.05) a year for each of the system's two million users, and channel fees of Rmb9 million (US\$1 million) from TV stations. Five government departments have signed up to use the network for intranet data transmission. Ten more are expected by end 2000. Investment outlay for expansion is about Rmb1.4 billion (US\$159 million).

China Aerospace, a 47.3 percent-owned subsidiary under the supervision of the China Aerospace Science & Technology Corporation, owns a 49-percent stake in broadband multimedia joint venture, JS-Casil BCTV Network. The remaining 51 percent is owned by the Jiangsu Broadcasting Bureau. Through the optical fibre pay-TV network, the venture plans to

launch value-added services, including high-speed internet access, distance learning and home shopping. The venture does not own the "last mile". Based on a valuation of US\$345 per subscriber, the network is valued at US\$2,417 million.

Jiangsu has seven million subscribers of the province's 21 million households. The company estimates the joint venture will make a profit of Rmb1 million (US\$114,077) in financial year 1999.

The third best strategy is being followed by TCL, whose joint venture for the TeleWeb project is partnered by Lotus Pacific and backed by Shanghai Cable TV Bureau. If there is any success story in this sector, we believe it will be TCL. TV set replacement and exports look promising, and market consolidation will help the company.

Also in this group is Myweb, which has made three smart moves: the company rents set-top boxes to cable bureaux; it places set-top boxes in shopping malls for free use; and it targets hotels and other public places and uses this exposure as a marketing ploy for its portal services.

The third player identified in this tier is the Shenzhen-based Zhongdian Electronics, which has teamed up with ISPs to promote its set-top boxes.

The least attractive strategy is the one adopted by Legend, which produces "information appliances", including PCs, set-top boxes, ISDN terminal adapters and cable and ADSL modems. The company aims to sell 100,000 set-tops this year. This type of box is unlikely to become popular for three reasons: its cost advantage over PCs is unclear; it doesn't offer much to PC owners; and the boxes face the same low-speed internet access problem as the telephone dial-up service. Legend's boxes could succeed as a cheaper alternative to desktop PCs. But if they do, they could undermine Legend's PC sales. ☹

Adapted from Warburg Dillon Read's "China's New Economy (4): Set-Top Box vs. Cable Strategy" (February 2000) by Joe Zhang (joe.zhang@wdr.com) and Raymond Jook (raymond.jook@wdr.com)

BROAD minds

Broadband was the sexiest thing at this year's annual Philippines cable show. Well, almost. Janine Stein listened to speakers, delegates and entertainers talk about the birds and the bees and other essential facts of life the cable industry will need as it grows up

SOMEONE is bound to get hurt when you expect arm-candy to be politically correct. For Nickelodeon's new Asia head of network and business development, Loren Fykes, the fellowship evening of this year's Philippine International Cable Show was a rude awakening to just how much clout a girlie entertainer and a sequined cleavage still wield.

But the laughs over race and penis size was, for those who thought it was funny, scant escape from the reality of the Philippines subscription TV market, which has languished for more than two years — some big money is being spent as rivals begin to take stock of where they are and where they need to be to compete... and where, exactly, does that leave the smaller guys?

The other reality — one which everyone alluded to but no one mentioned by name — was the rival cable group, Ficap. Last year, Ficap didn't have much of a thing going but wore the T-shirts to the Philippines Cable Television Association's (PCTA) annual show anyway. This year, Ficap got Philippines president, Joseph Estrada, to come to its show, and they didn't even bother turning up to the PCTA's.

If it's difficult to assess the Ficap impact, the effect of the convergence drive and the entry of well-funded power-players is being felt all over. And especially in the pockets of vendors such as PanAsian Systems, which signed a hardware deal in excess of US\$1.2 million with dominant cable multi-system operator, SkyCable, at the show.

System upgrades, according to SkyCable's managing director, Carlos Tria, are costing roughly Ps350,000 (US\$8,700) to Ps400,000 (US\$9,900) per kilometre to be able "to meet the demands 10 years down the road".

If the past two years have been talk rather than action filled, the entry of high-powered telco, the Philippines Long Distance Telephone (PLDT), has injected a sense of urgency into an otherwise less-



than-urgent environment. Through some fancy foot work that allowed it to slip past foreign ownership restrictions, the PLDT now owns Home Cable, which is the country's second largest operator. The PLDT also has an ADSL trial under way, which means a double shot at subscription revenues from a whole range of services. Rival Bayontel, a sister company to SkyCable, has no ADSL, although SkyCable is making great claims with its high-speed cable modem service, ZPDee.

High-speed internet access was but one of the buzz-words rolled into the theme of this year's eighth show, "gearing up for convergence". "Convergence is a key driver in revolutionary changes," said National Telecommunications Commission (NTC) commissioner, Joseph Santiago, in his address to delegates.

Before two systems can converge however, they have to exist in the first place, and the Philippines is not known for its high telephone density or its cable pass rate. Santiago says the government is on a mission to increase telephone penetration and to provide basic services to parts of the country that are currently underserved.

According to NTC statistics, in 1992 there were 1.7 telephone lines per 100 people. Today, that number has increased to 10 lines per 100 people. "It would have been higher had they taken advantage of cable television networks, which are capable of providing telephony," Santiago said. But they didn't, primarily because they aren't allowed to. And there's no end in sight either, with major dilly-dallying on

the regulatory front.

"With convergence, we can solve this issue," Santiago added. "The Philippines cannot just sit back and not adopt convergence. It is imperative for us to explore the benefits." Unfortunately, he added, the country's regulatory regime "is not friendly to a convergent environment." He wasn't saying anything there that the industry doesn't already know — or hasn't waited more than five years for, although

PCTA president Elpi Paras insisted he was "very confident" that the cable bill would be passed soon.

There is, however, a complicating factor now — another bill, this time dealing with convergence. And it is bound to keep legislators grinding away for years to come. Santiago said the Department of Telecommunications (DOTC) and the NTC had already started working on draft regulations for convergence. "I am urging the cable TV industry to help the government flesh out a convergence legal structure. We are convinced that we can find ways to set policy and regulatory framework to encourage convergence," he said.

The convergence discussion, as far as the industry is concerned, is already well under way. "We don't see the cable TV bill and the convergence bill as two separate things," said DOTC consultant Dr Manuel Lallana. "The cable bill is just the first step."

If the country's politicians continue on the way they have come, that debate will drag on. Meanwhile, industry leaders beef up the pressure and their rhetoric. "We must learn in order to keep our country on a par with our neighbours," said Paras. "We are sitting on a goldmine, but it is up to us to dig and search for that elusive vein of gold."

For the moment, the "vein of gold" is not a very lengthy one. Cable households passed are well below 30 percent of all TV households, and there is no sign of when — or if — direct-to-home satellite platforms will ever get off the ground.



If they are slower than expected on network roll out, no-one at the PCTA is fuzzy on business needs for the future. Not only does that include foreign investment options and the formal definition of "cable" by regulators, it also covers a whole new attitude towards system reliability and customer service.

"New demand for internet related business is driving cable evolution into a different category," said Paras. "We believe cable should be categorised as a broadband service provider... already telcos like PLDT and Bayotel have identified our infrastructure as a vital component in making convergence a reality."

SkyCable's Tria says SkyVision and Bayotel are already "structurally prepared" to merge in a convergent environment. Tria has been driving a system clean up for more than a year in order to take advantage of future opportunities. "Convergence is our biggest hope of additional revenue," he said.

At the moment, cable operators receive Ps200-Ps500 (US\$5-US\$12.55) for video services. SkyCable is able to charge Ps550 (US\$14) for its premium Sky tier and Ps320 (US\$8) for the Sun tier. The average wired householder will spend Ps1,200 (US\$30) on internet services, with telephony adding a potential Ps1,100 (US\$28) per household for a basic service plus international dialing. VOD charges could add another Ps350 (US\$9) a month (seven movies at Ps50 (US\$1.25) each). SkyCable's new ZPDee cable modem service has already succeeded in driving up per-sub revenue from the monthly Ps550 (US\$14) for cable services to Ps1,700 (US\$43) per sub average for a

data/video package.

But the additional revenues do not mean cable operators are "home free", said Tria. "We need technological expertise, and a culture change... our standards need to be more stringent. Data services that go down will result in more than irate customers. The repercussions of telephone service failure can be life threatening."

The quality issue remains one highlighted by international equipment vendors, especially those involved in reverse transmissions necessary for two-way communications. In an industry that hasn't been able to raise subscription rates for almost three years, every peso counts. But still, vendors caution against sacrificing quality. "Either you have to pay now, or you're going to pay forever," one said. On top of that are the installation practices and ongoing maintenance, both of which are constant themes pushed by hardware vendors.

Smaller operators worry about how to keep up. According to Senator Ramon Magsaysay, most often called "the father of cable TV in the Philippines", they don't necessarily have to compete on size alone. "There are times for bigness," he said, adding, "the era of the new economy means it's no longer how big you are, but how fast." All of which means the small guys have their opportunity.

There was another piece of advice to the short-sighted: "If you see yourself today as primarily a cable operator, you will be out of business soon," said the DOTC's Lallana. "The winners in the new game are those who see themselves as broadband service providers."

Given the merger-and-acquisitions mania of the past, it was the PLDT that reached out to smaller players with the most practical alternative solutions — an apparent bandwidth offer that makes selling out systems to larger players unnecessary. "The PLDT is capable of providing small and independent CATV companies the needed nationwide broadband link to content and value-added service providers at a lesser cost," said PLDT president, Manny Pangilinan. "There should be no fear that the large operators will make obsolete smaller operators. We need to provide interconnectivity."

"The PLDT," he added, "is open to partnerships in the same way as it does with telcos. We are open to any arrangements, down to the lease of broadband capacity."

If that soothes some worries, what cable operators want more of is money, or more

specifically, from whom can they get the most. And that's where Dr Paco Sandejas, vice president of Hambrecht & Quist Asia Pacific, came so in handy. Sandejas' seminar was entitled, "Valuing your System", or, less formally, "how to get the most money out of those vultures without selling your soul". He discussed issues such as partnering, identifying the various types of partners (including family and friends), and a little about how venture capital really works. "There's a finite lifetime to the structure," he says. "We are not with you forever."

He also told a packed room that the professional group they take in as partners — especially if they are going IPO — "will want more transparency", along with a large dose of truth and realism. "Don't hide things. If you hide, the investor starts to doubt and the buyer walks away".

Us, hide? Never, cable operators' exclamations rippled around the room. Absolutely, said some programmers, who say their battle for accurate subscriber reporting is far from won. As is the ongoing battle against piracy and signal theft. The problem is, programmers go into secret little huddles with locked doors and closed agendas, so even if they are doing anything, no one knows about it.

And are they doing anything? Yes, programmers say, declining to give much proof, supposedly in the name of ongoing undercover missions. Maybe, say others eager to be seen to be doing the right thing. No, but don't quote me, says everyone else, happily carrying on with whatever they were doing before, including buying Ps100 (US\$2.50) pirated CDs on the street. Here's another tip, one added: pop across the border to Malaysia, where they are even cheaper. Around Ps40 (US\$1) say some.

Piracy is one of the weapons being used against Ficap. "Ficap has the biggest piracy offenders, but at the same time they have the connections to attract the president to their show," said a programmer. Without mentioning names, the NTC commissioner urged the rivals to "thrash out their differences to promote the industry". Paras said although only 300 of the country's 1,000 listed operators were PCTA members, "we believe our group has control of more than 90 percent of the viewing public, so there is no question of who is boss." And that, like much else about the cable industry in the Philippines, is a conversation that's likely to go on long into the night. ☞

WOMEN'S room

Mansha Daswani looks at a new show that's still mostly too cramped to be considered stylish among Asia's working women

"FOR women in the industry, increasingly, the sky's the limit," chirped CNBC Asia presenter, Maura Fogarty, in a recent episode of the business network's weekly show, *Asian Working Woman*. This particular edition, devoted to the Asian Aerospace 2000 exhibition in Singapore, bubbled with enthusiasm over the rising number of women operating successfully in "a man's world".

"Boy's club", "boys and their toys", "male-dominated field"... host Lisa Oake (who took over from Cecilia Zecha earlier this year) clearly wanted us to be in no doubt that aerospace has not been a woman's place. While her intention was probably to inspire female viewers to break new ground, reducing her guests to women first and professionals second is not exactly where career women are today.

Brief, 30-second soundbites from men in the industry commenting on their new colleagues' gender didn't help. "It's great," they all chimed. Since when did their consent count?

The show was not all bad. Pilot Rosa Chak's comments on her decision to delay having children were insightful for the kinds of choices career women have to make. There were other interesting tidbits: Indian airline, Deccan Airways, was the first in Asia to hire a female pilot, or only 4,000 of the world's 80,000 pilots are women. The tech section was vaguely interesting, with a selection of websites for aspiring female pilots.

CNBC's effort in catering to a new audience segment is commendable. But there is a lurking suspicion, born out by the execution so far, that the push into women's programming — launched in November, 1999 — could be more about attracting advertising dollars than about exploring new viewer demographics.

Is it working? Well, the high-voltage

designer labels don't seem to be standing in line. Advertisers currently include Credit Suisse Private Banking, Agilent Technologies, boom.com, Star Alliance and Allianz — the same advertisers as anywhere else on the channel.

This show has heaps of potential. It just needs to be tapped. And sometimes it is. Witness the segment on women's involvement in the Vietnam War that was part of the 25th anniversary celebrations of the war's end. The show highlighted an angle which would otherwise have been crushed in the flood of broader footage about who was right, who was wrong and the impact of Agent Orange.

Another good one was on parenting, and more specifically, should men have paternity leave? The street poll was interesting and the report on a stay-at-home dad in Singapore was a highlight.

So far, however, the show is too often inconsistent, unfocused, superficial and simplistic. There's also a shoestring-budget feel that cannot, if logic serves us, go down well with the well-padded advertising minds of this modern world's Diors, Chanel or Guccis.

An example of this was the extensive rehashing of a high-profile US military sexual harassment case, where meaningful insight was as scant as both the Asian angle or the practical advice offered. "Is sexual harassment relevant?," was one question. Excuse me? What am I doing watching a programme that thinks its own segments may be irrelevant? Frugality or fear in tackling the Asian angle head-on? We'll never know but the result was chicken-hearted. We deserve more.

Asian Working Woman can also dabble in the realm of the vacuous, which is annoying, not to mention an insult to the intelligence. A brief segment on dowry in India, for instance, was presented by a poster girl for optimism beaming on



about how NGO-organised mass weddings are helping to wipe out the practice, which involves the bride's family giving large sums of money to the groom. India's dowry problem is a complex one authorities have been unable to eradicate. That hundreds of women are murdered every year in "dowry deaths" was completely ignored. As were the women involved in the mass weddings. In one scene, a man talked happily about how the new mass system had saved him a great deal of money. Meanwhile, his daughter hung her head in silence, a picture of misery. That one portrait of marital un-bliss and familial respect said more about the plight of women in India's rural communities than anything CNBC's presenter had to say.

Which raises the question: what do CNBC's presenters offer? In profiling female executives in the Asia-Pacific, the results are hit and miss and the constant harping on the woman-in-power angle grows tiresome.

It has to be said that the "ooh, look, a woman in power" attitude is not, mercifully, carried over to the rest of the network. A recent programme was followed by Bernard Lo's interview with Hong Kong chief secretary for administration, Anson Chan, which lost the girl-power attitude and was the better for it.

For all its faults, *Asian Working Woman* is sometimes able to let its hair down. One rare episode closed with an excellent segment on an all-female, multi-ethnic jazz troupe from the US. Shots of the Eden Project's recent show in Singapore, interspersed with soundbites from the women themselves, was great fun. Does it fit into the show's all-too-narrow women-in-suits business image? Sure it does, unless you think Asia's working women don't like to have fun. ❌

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pull of gravity

Niall Rudd uses broadband benchmarks to measure how Asia might ascend to the world's internet centre of gravity

I HAD an interesting discussion with a friend in one of the UK's e-commerce start-ups the other day concerning the experience gap supposed to exist between the US and the rest of the world. My e-commerce guru was explaining how US entrepreneurs and venture capitalists are adamant that the rest of the world is catching up. I think the rosy prediction, because of various issues plaguing Europe, should be confined to Asia.

The discussion boiled down to how you measure the lead. Is it the rise in proportion of a country's stock market value based on internet businesses? No, too volatile and, in any case, many global internet businesses have flocked to the heavily backed Nasdaq in preference to local stock markets. Is it the number of internet subscribers? Well, possibly, but perhaps internet access is becoming a little too much like a commodity. How about the idea that the penetration of the more advanced service, broadband internet access, gives us the best benchmark of a country's internet progress?

My reasoning is that if people like you and me cannot get online, we'll not be able to feed the revenue needs of internet businesses. I also don't think we can rely on 56k dial-up modem subscribers either.

It seems that the chance for the rest of the world to catch up or even leapfrog the US will be through developing a generation of net-centric innovations on the back of broadband access. Broadband, after all, represents a 'better internet', a truly

new and potentially powerful experience, which should in time replace large swathes of dial-up territory. A great wave to ride on. In its wake, broadband heralds a new opportunity to build innovative, intensive and diverse day-to-day network services. Rather than assuming broadband subscribers inhabit some kind of high-speed ghetto, they will in fact be among the more important measures of a healthy internet-focused economy.

So how well is the world outside the US doing? Comsys is confident that the internet centre of gravity has the potential to move from North America, which has so far grabbed most of the headlines, to Asia.

We predict the potential market of addressable homes in Asia will climb to almost 250 million households — or 25 percent of Asia's estimated one billion households — by 2010. North America by then will have 100 million households, representing a large slice of the market.

Today's Asian hot spots include Hong Kong, Taiwan, Singapore, Japan and South Korea. Comsys estimates the number of addressable households in these five countries will rise from 28 million today to exceed 65 million by 2010.

Cable networks are the preferred access platform and there may be well more than 100,000 broadband subscribers on Hong Kong's i-TV Netvigator and i-cable services by year-end.

Taiwan has about 30,000 broadband households, and four or five emerging broadband operators led by the Koos Group's Gigamedia with some 20,000 households acquired mostly over the last six months. A similar number of subscribers has been secured by Singapore's two main broadband operators. The SingTel Magix network could easily reach 40,000 users by year end. Singapore Cable Vision has about 10,000 cable modem households, and is set to meet its target of 20,000 by year-end.

Korea is host to several broadband operators, including Dacom, Hanaro Telecom, Korea Telecom and new names like Thrunet, whose collective subscriber count may already be approaching one million. KEPCO has opened its cable network to new operators.

Japanese households will dominate the region's profile, with what Comsys believes are already 20 million addressable homes, and a growing number of active broadband hopefuls, including NTT, Titus, Jupiter and KDD. Some of these operators are already pursuing DSL solutions, which will catch up. Wireless broadband options are also being investigated and new licences awarded.

The evidence is that, despite a larger addressable market in Europe, the degree of broadband penetration in Asia may already exceed Europe, and, over the next few years, seems set to race ahead. If we compare broadband subscriber density in a few regions, we can estimate the growing size of this experience gap. Compare Korea and the US to a basket of 10 European nations (Germany, United Kingdom, France, Italy, Spain, Netherlands, Belgium, Portugal, Austria, Finland).

If we accept that broadband households will number two million in Korea and 300,000 in Europe by year-end, then in order for Europe to catch up with the Korean density of broadband households, European operators need to sign up another 19.5 million households. At, say, 200,000 new broadband homes per month, Europe would already be over eight years behind Korea. By the same reckoning, Europe would need 1.5 years to reach the broadband penetration levels already achieved in the US. That's the size of the experience gap.

Statistics eh? So is it true that, contrary to the views of some venture capitalists, Asia and US are in fact leaving the Europeans behind? Quite possibly, and revealingly my e-commerce guru is not here to argue the case because he is packing-up and moving to Singapore. ☹

Niall Rudd is the Broadband consultant at Comsys, and can be reached at (44) 1727 832288 or niall@comsys.co.uk. The Broadband Report can be ordered at www.comsys.co.uk.

Country	Broadband subs (estimated end of 2000)	% of households
European-10	300,000	4.1
USA	3,000,000	2.8
Korea	2,000,000	14.7

Sources:
Comsys study, Comsys Broadband Report, The Economist and World Fact Book, April 2000.

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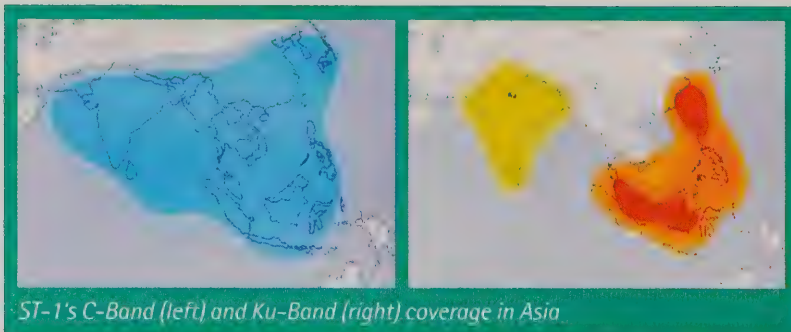
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FOCUS ON... ST-1

IN August 1998, Arianespace launched the ST-1 communications satellite to 88° east longitude. ST-1 is owned by Singapore Telecom (SingTel) and Taiwan's Chunghwa Telecom Company Ltd. The companies jointly operate the spacecraft from control centres in Seletar, Singapore, and Taipei, Taiwan.

The estimated cost of the satellite, ground facilities and the Ariane launch vehicle was US\$240 million. Because of the satellite's near-perfect launch, enough fuel was conserved to extend its mission life by three to four months beyond the 12 years prime contractor Matra Marconi Space initially projected.

The operators: Chunghwa Telecom, wholly owned by the Taiwanese government, operates domestic and international telecoms businesses and invests in telecom-related and other ventures authorised by the Ministry of Transportation and Communications.

The Taiwanese government recently announced a two-stage privatisation process under which 13 percent of Chunghwa Telecom will be offered to local investors, 12 percent to overseas investors and five percent to employees. Once this first phase of privatisation is completed next year, the government will offer another 20 percent to the public and an additional 13 percent to Chunghwa employees. Foreign investors will be allowed to purchase shares on the open market, but cumulative holdings will be restricted to 30 percent. The intended goal of privatisation is to usher in a new era of technological advancements as well as to help Chunghwa Telecom to participate more fully in overseas ventures.

Incorporated on April 1, 1992, SingTel is licensed to provide telecommunications and postal services within Singapore. The SingTel Group currently enjoys a market capitalisation of about US\$30 billion, which makes it one of Asia's largest companies.

SingTel Group subsidiaries include mobile telephony, paging services, publishing, postal services, investments, submarine cable repair and telecommunications equipment sales. The company also participates in global strategic alliances and joint ventures. To date, more than US\$1.4 billion has been invested in 62 joint ventures and strategic investments in 20 countries, including China, Indonesia, Thailand, Australia, Vietnam and the Philippines.

The platform: ST-1 carries 16 high-power Ku-Band and 14 medium-power C-Band transponders. Weighing over 3,000kg at launch, ST-1 generates more than 6,500 watts of electrical power. The satellite's broad C-Band coverage beam extends from the Middle East to Japan, including all of Southeast Asia.

ST-1 also features two Ku-Band spot beams: a "K1" beam stretching from Taiwan to Singapore and from Indonesia to Malaysia and a "K2" beam centred over the Indian subcontinent. The ST-1 satellite currently delivers telephony, digital direct-to-home (DTH) broadcasting, VSAT and other business services.

The issues: Just weeks before ST-1's launch, the People's Republic of China deployed a new Chinasat communications satellite to 87.5° east longitude — just 0.5 degrees away from the orbital position ST-1 was set to occupy. The proximity between the spacecraft raised serious questions about interference. As the sole owner of the satellite's orbital location and frequency assignments, SingTel is responsible for the operation of the satellite under international regulations. In the end, all potential interference problems between ST-1 and Chinasat were resolved through frequency coordination efforts involving the telecommunications authorities of Singapore and China.

ST-1 also ran into still-unresolved Ku-Band regulatory issues in India. The original business plan dedicated eight Ku-Band transponders to the satellite's high-powered "K1" beam, which covers

the Indian subcontinent. The goal was to target the potentially lucrative Indian digital DTH satellite TV market. These plans were brought to a screeching halt when the government banned Ku-Band signals.

The customers: Despite regulatory problems in India, SingTel and Chunghwa Telecom claim they have sold all of ST-1's Ku-Band capacity. In September 1998, Sterling Group chairman, C. Sivasankaran, took an option on three Ku-Band transponders, with the aim of launching a DTH educational service in India. The plan was to offer students free digital set-top boxes, worth about US\$212 each, and to co-ordinate a 60-channel programming package with the school curriculum. Sivasankaran was believed to be investing about US\$47 million in the project. If the deal is still in place, Sivasankaran appears to be sitting on the capacity, and satellite monitors report no TV activity from that beam.

ST-1 currently carries digital DTH services for Taiwan on its "K1" coverage beam. These transmissions can be received by 90cm dishes. Taiwan Television Enterprise Ltd also uses one Ku-Band transponder for satellite newsgathering.

SingTel is currently using C-Band capacity to enhance its own telecom and data transmission services and to provide occasional video services for other broadcasters. In October 1999, SingTel announced it would use ST-1 to provide gateway internet facilities to Eagle IT, a company appointed by Myanmar telecommunications authorities to establish an educational intranet and internet service for Myanmar. SingTel currently provides internet gateway services to 40 ISPs in 20 different countries, including Bangladesh, Sri Lanka, Pakistan, Nepal, India, Brunei, Malaysia, Cambodia, the Philippines, Indonesia, Hong Kong, Japan, Taiwan, South Korea and Australia. 🌐

ST-1 SATELLITE SPECIFICATIONS

Launch Date: August 25, 1998

Orbital Location: 88° east longitude

Prime Contractor: Matra Marconi Space

Spacecraft type: EUROSTAR three-axis stabilised platform featuring bipropellant propulsion

Mission lifetime: 12 years, four months

Satellite power: More than 6.5 kilowatts

System capacity: 14 active C-Band transponders with 36 MHz bandwidth; 16 active Ku-Band transponders with 54 MHz bandwidth

Transponder Polarisation: Horizontal/ Vertical

C-Band Power: 41 dBW EIRP

Ku-Band Power: 49 dBW EIRP

Mark Long

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channel guide

what's on satellite over Asia

Satellite TV/Radio Channel Name	Tpr. No.	Frequency (in GHz)	Pol.	TV Standard (Analogue/Digital)	Subcarrier (in MHz)	Pre-emp Symbol Rate	Audio Notes FEC Rate
INSAT-3DT 58°E							
DD ntv	6	3811	LH	PAL-clear	5.5	75 uS	Associated mono
DD nrya	12	3922	LH	PAL-clear	5.5	75 uS	Associated mono
DD ntv	24	4144	LH	PAL-clear	5.5	75 uS	Associated mono
INTELSAT-703 57°E							
Worldnet	35G	4035	RH	PAL-clear	6.65	75 uS	Associated mono
Vijay Movies (satellite)	36G	4095	RH	MPEG-2			
MTA	38G	4177	LH	PAL-clear	6.6	75 uS	Associated mono (Arabic)
Sun TV	21H	3750	RH	PAL-clear	6.3/6.0	75 uS	Associated mono (Tamil)
Udaya TV	22H	3890	LH	PAL-clear	6.3/6.0	75 uS	Associated mono (Malayalam)
Surya TV	24H	3980	RH	PAL-clear			Associated mono
TV	187S	4140	LH	PAL-clear	6.6	75 uS	Associated mono
INTELSAT-804 64°E							
STAR News India (satellite)	38H	4095	RH	MPEG-2		0.750 Msym/sec	FEC-1/4 QPSK
Star TV News	10G	4095	LH	MPEG-2			
Star TV	38H	4095	LH	MPEG-2 encrypted			
Star TV	40H	4095	RH	MPEG-2 encrypted			
INTELSAT-704 66°E							
Vijay TV	21EH	3760	RH	PAL-clear	6.0	75 uS	Associated mono
Star Movies	22EH	3775	RH	MPEG-2		0.600 Msym/sec	FEC-1/4 QPSK
MTB Mongol	24HEZ	4035	LH	SECAM-clear			
MTB	34	4035	LH	SECAM-clear	6.6	75 uS	Associated mono (Hindi)
STV	18GS	4035	LH	PAL-clear	6.6	75 uS	Associated mono (Hindi)
Telugu News	18GH	4035	RH	MPEG-2 clear		0.6 Msym/sec	FEC-3/4 QPSK
Gemini TV	18GB	4035	LH	PAL-clear	6.6	75 uS	Associated mono
Sun News	18GB	4035	LH	PAL-clear	6.6	75 uS	Associated mono
PAS-4 68°E							
BBC World	1	3741	H	NTSC		11.4 Msym/sec	FEC-3/4 QPSK
Channel Channel	2	3741.2	V	NTSC		11.4 Msym/sec	FEC-3/4 QPSK
Discovery	4C	3765	V	SECAM-PAL			
BBC World	5C	3825	V	PAL-clear	6.6/7.2	75 uS	Associated mono
Hansa TV	6C	3845	V	PAL-clear	6.6	75 uS	Associated mono
ESPN	5C	3865	H	SECAM-PAL			
Sony TV	7C	3870	H	PAL-clear	7.2	75 uS	Associated mono
Sony 2	7C	3890	H	PAL-clear	6.6	75 uS	
Star World TV	13C	4035	LH	MPEG-2		0.470 Msym/sec	FEC-3/4 QPSK
CNN	13C	4095	H	PAL-clear	6.6	75 uS	Associated mono
Cartoon Network	13C	4115	H	PAL-clear	6.6	75 uS	Associated mono
TNT	13C	4115	H	PAL-clear	6.6	75 uS	Associated mono
Madagascar (Madagascar)	15	4135	H	MPEG-2		0.470 Msym/sec	FEC-1/2 QPSK
Music Asia	16C	4170	V	PAL-clear	6.6	75 uS	Associated mono
MTV India	15C	4185	H	PAL-clear	6.6	75 uS	Associated mono
NHK	20K	12805	V	NTSC/Lsbh	7.36/7.75	75 uS	Associated mono
LSI-1 75°E							
Malay TV	14A	3580	V	PAL-clear			
APSTAR-2R 78.5°E							
Starline Pacific	10H	3725	H	MPEG-2		20.250 Msym/sec	FEC-3/4 QPSK
Star 21	14	3785	H	MPEG-2		5.110 Msym/sec	FEC-3/4 QPSK
TVB	14	3850	H	MPEG-2		11.31 Msym/sec	FEC-3/4 QPSK
Discovery Channel	7A	3855	H	MPEG-2		10.130 Msym/sec	FEC-3/4 QPSK
Asia	14	3920	H	MPEG-2		20.440 Msym/sec	FEC-3/4 QPSK
Star World	14	3980	H	MPEG-2		20.440 Msym/sec	FEC-3/4 QPSK
Star TV (Thailand)	10H	12725	V	MPEG-2		20.440 Msym/sec	FEC-3/4 QPSK
Star TV	10H	12785	V	MPEG-2		21.040 Msym/sec	FEC-3/4 QPSK
Star TV	11B	12775	V	MPEG-2		22.425 Msym/sec	FEC-3/4 QPSK
Channel Phoenix TV	10H	13475	V	MPEG-2		5.100 Msym/sec	FEC-3/4 QPSK
Star TV (Singapore)	10H	13485	V	MPEG-2		20.440 Msym/sec	FEC-3/4 QPSK
THAICOM-2/3 78.5°E							
TV Maxima	1E	3411.5	V	MPEG-2		4.310 Msym/sec	FEC-1/2 QPSK
TV Channel	1E	3420.5	V	Digital		5.260 Msym/sec	FEC-1/2 QPSK
TV Channel	1E	3430.5	V	Digital			
TV Channel	2E	3440.5	V	Digital		6.349 Msym/s	FEC-3/4 QPSK
ETC India	2E	3450.5	V	PAL-clear	6.6/7.02		Associated mono
TV Channel	2E	3460.5	V	Digital		6.349 Msym/sec	FEC-3/4 QPSK
Join TV	3E	3435	V	PAL-clear	6.6/7.02		
Ray TV	3E	3436.5	V	PAL-clear	6.6/7.02		
Ray Plus TV India	4E	3454	V	PAL-clear	6.6		
ATH Bangladesh	5E	3470	V	PAL-clear			

[illegible]

Satellite TV/Radio Channel Name	Tpr. No.	Frequency (in GHz)	Pol.	TV Standard (Analogue/Digital)	Subcarrier (in MHz)	Pre-emp Symbol Rate	Audio Notes FEC Rate
Norford GeophyH2							
RAL TMT Sony Broadcast							
INDOVISION		3680	V	MPEG-2 (encrypted)		6.25 Mbps/sec	SEC-1/3 QPSK
Encrypted BBC World							
CNN International (RCTI)							
SCS-TPH							
BSAT-1A 110°E							
Wowow	6	11804	RH	Coastal NTSC		PCM	Pulse Code Modulation
NHK BS-1	7	11843	RH	NTSC-clear		PCM	Pulse Code Modulation
NHK HDTV	9	11880	RH	Muse-HDTV		PCM	Pulse Code Modulation
NHK BS-2	11	11919	RH	NTSC-clear		PCM	Pulse Code Modulation
SINOSAT-1 110.5°E							
Shanghai TV		4100	V	MPEG-2		6.2 Mbps/sec	SEC-1/3 QPSK
TVA-Japan		4112	V	MPEG-2		6.25 Mbps/sec	SEC-1/3 QPSK
CCTV		4287	V	MPEG-2		17.4 Mbps/sec	SEC-1/3 QPSK
PALAPA-C2 113°E							
RCTI	3EH	3470	H	MPEG-2		6 Mbps/sec	SEC-1/3 QPSK
STAR TV	5EH	3660	H	MPEG-2		16.25 Mbps/sec	SEC-1/3 QPSK
Free World Indonesia For Mass							
Channel (V) Sky News							
Channel (V) Asia Free Movies							
Trans TV	1H	3760	H	MPEG-2		11.25 Mbps/sec	MPEG-2 QPSK
Now TV	3H	3810	V	MPEG-2 QPSK		26.125 Mbps/sec	SEC-1/3 QPSK
TVRI	4H	3840	H	PAL-clear	6.2		Unknown
					5.8	75 uS	Associated mono
ATVI	5H	3880	H	PAL-clear	5.90/7.2	75 uS	Radio mono
					5.8	75 uS	Associated mono
FTV-4	6H	3925	H	Diplocher			
CNBC	9H	4040	H	PAL-clear	8.8	J17	
MTV	11H	4120	H	PAL-clear	8.0	75 uS	
					7.55/7.75	75 uS	Associated mono
TV-5 Asia	12H	4160	H	PAL-clear	5.0/5.6		Associated mono
Alpha TV	2V	4762	V	MPEG-2 QPSK		47.500 Mbps/sec	SEC-1/3 QPSK
CNN	7V	3990	V	PAL-clear	5.3	75 uS	CNN Radio
					5.8	75 uS	Associated mono
Indonesian	3V	4074	V	MPEG-2		6.5 Mbps/sec	SEC-1/3 QPSK
RTB	11V	4140	V	PAL-clear	5.8	75 uS	Associated mono
SCTV				PAL-clear	6.0	75 uS	Associated mono
TNI	12V	4165	V	MPEG-2		6.7 Mbps/sec	SEC-1/3 QPSK
Satya TV (Islam)	4V	10.670	V	MPEG-2		31.000 Mbps/sec	SEC-1/3 QPSK
THAICOM-1 120°E							
TV-Less		3770 (H)	V	MPEG-2 FT2		3.022 Mbps/sec	SEC-1/3 QPSK
TV		3840	V	MPEG-2 FT2		6.000 Mbps/sec	SEC-1/3 QPSK
JCSAT-3 128°E							
Asian Business	7V	4060	V	MPEG-2 QPSK		6.000 Mbps/sec	SEC-1/3 QPSK
Stock TV/BN	6H	4000	V	MPEG-2 QPSK		7.000 Mbps/sec	SEC-1/3 QPSK
APSTAR-1A 134°E							
Zhejiang TV	4A	3780	H	PAL-clear	5.6	75 uS	Associated mono
JON	5A	3820	H	MPEG-2		26.125 Mbps/sec	SEC-1/3 QPSK
Guizhou TV	9A	3960	H	PAL-clear	5.6		Associated mono
China TV	2B	4770	V	MPEG-2		16.25 Mbps/sec	SEC-1/3 QPSK
Chengdu TV	2B	4795	V	MPEG-2		26.125 Mbps/sec	SEC-1/3 QPSK
Yunnan/Guizhou TV	8H	4000	H	PAL-clear	5.6	75 uS	Associated mono
Shizhan TV	10H	4080	H	PAL-clear	6.0	75 uS	Associated mono
Xinjiang TV	11H	4120	H	MPEG-2			
CCTV-3	12H	4160	H	PAL-clear	5.6	75 uS	Associated mono
CCTV-5 ABC	17	3660	V	MPEG-2 1/2 Powerline			
CCTV-1	4V	3680	V	PAL-clear	5.8	75 uS	Associated mono
CCTV-2	5V	3900	V	PAL-clear	5.8	75 uS	Associated mono
CETV-1	7V	3960	V	PAL-clear	5.6	75 uS	Associated mono
Zhejiang TV	8V	4020	V	PAL-clear	5.6		Associated mono
Shandong TV	10V	4100	V	PAL-clear	5.6	75 uS	Associated mono
CCTV-2	12V	4180	V	PAL-clear	6.0	75 uS	Associated mono
APSTAR-1 138°E							
CETV	12A	4160	H	PAL-clear	5.6	75 uS	Associated mono
CSTV	1B	4020	V	MPEG-2 (encrypted)			
Renmin	2B	3730	H	MPEG-2 IMV		6.25 Mbps/sec	SEC-1/3 QPSK
Vision	4B	3960	V	MPEG-2 (up)		6.000 Mbps/sec	SEC-1/3 QPSK
TVBS	5B	3800	V	Digital			
Macau Satellite TV	9B	4060	V	MPEG-2		16.25 Mbps/sec	SEC-1/3 QPSK
CNN	7B	3840	V	PAL-clear	6.3	75 uS	CNN Radio
					6.0	75 uS	Associated mono
TNT & Cartoon Network	3B	4020	V	DMAC-PAL			
HBO	9B	4080	V	MPEG-2			Cinema
ESPN International	10B	4100	V	DMAC-PAL			
Baccarat Game	11B	4140	V	NTSC clear	5.0	75 uS	Associated mono
PRTV	12B	4180	V	MPEG-2			
Xinjiang TV	11H	4120	H	MPEG-2		16.25 Mbps/sec	QPSK

2000 CONFERENCE & EXHIBITION DIARY

May 29-30

Website Content Management

Grand Copthorne Waterfront, Singapore

Contact: IQPC

Tel: (65) 325 6330

Fax: (65) 224 2515

e-mail: enquire@iqpc.com.sg

Web: www.iqpc.com/asia

BROADCASTASIA2000

June 5-8

Innovation in technology is highlighted at BroadcastAsia2000 in Singapore. Included on the seminar agenda is the "Visualizing MPEG" tutorial, an all-you-need-to-know session on digital television. "Business Opportunities" will address value creation, piracy and e-commerce, and "TV-Internet-TV" will explore IP and DTV. BroadcastAsia2000 is co-located with CommunicAsia 2000, and incorporates CableSat 2000, Professional Audio Technology 2000 and ComGraphics & Animation

Contact: Singapore Exhibition Services:

Tel: (65) 738 6776

Fax: (65) 732 6776

e-mail: info@sesmontnet.com

web: www.broadcast-asia.com

June 6-8

Internet World Australia

Sydney Convention and Exhibition Centre, Australia

Contact: Kirby Network Services

Tel: (61 2) 9310 5544

Fax: (61 2) 9310 5404

e-mail: exhibit@kirby.com.au

Web: www.iw-asia.com/au

June 12-16

CDMA World Congress

Hong Kong Convention and Exhibition Centre

Contact: IIR Ltd

Tel: (852) 2219 0111

Fax: (852) 2219 0112

e-mail: cdma@iir.com.hk

Web: www.cdmaconferences.com/

www.iir.com.hk

June 21-25

Internet World Korea

Seoul, South Korea

Contact: Ted Kim, Korea Management Association

Tel: (82 2) 3786 0190

Fax: (82 2) 3786 0019

e-mail: ted@kma.or.kr

Web: www.iw-asia.com/kr

June 28-29

Satellite Communications for Non-Technical Professionals

Grand Hyatt Hotel, Hong Kong

Contact: Steve O'Rourke

Communication Systems Limited

Tel: (44) 1727 832288

Fax: (44) 1727 810194

Web: www.comsys.co.uk

June 28-30

Filmart 2000 — Hong Kong

International Film and TV Market

Hong Kong Convention and Exhibition Centre

Contact: Irene Ho, HKTDCC

Tel: (852) 2584 4397

Fax: (852) 2824 0249

e-mail: hktdc@tdc.org.hk

Web: hkfilmart.tdc.org.hk

June 29-July 1

The Digital Millennium: Opportunities for Asian Media

Singapore

Contact: AMIC

Tel: (65) 792 7570

Fax: (65) 792 7129

e-mail: amicline@singnet.com.sg

Web: www.amic.org.sg

August 27-30

DSLcon Asia (Digital Subscriber Line)

Hong Kong Convention and Exhibition Centre

Contact: Sheri Turner-Weber, DSLcon

Tel: (1 408) 778 1994

Fax: (1 408) 778 7078

e-mail: sweber@dslcon.com

Web: www.dslcon.com

Confex Partners Ltd

Tel: (1 978) 371 1792

Fax: (1 978) 369 2036

e-mail: berndtson@aol.com

September 27-29

Taipei Satellite & Cable 2000

Taiwan

Contact: Vicky Tu

Tel: (886 2) 2778 5818

Fax: (886 2) 2778 2442

e-mail: catvshow@ms29.hinet.net

September 27-29

Internet World India

Pragati Maidan, New Delhi, India

Contact: Micromedia

Tel: (91 80) 571 1340,

Fax: (91 80) 571 0992

e-mail: info@iworldindia.com

Web: www.iworldindia.com

October 17-21

Broadcast India 2000

World Trade Centre, Mumbai, India

Contact: Saicom Trade Fairs

and Exhibitions

Tel: (91 22) 215 1396, 215 2721

Fax: (91 22) 215 1269

e-mail: saicom@bom2.vsnl.net.in

Web: www.saicom.com/broadcastindia

October 24-29

Shanghai TV Festival

China

Contact: Shanghai TV Festival

Tel: (86 21) 6253 7115

Fax: (86 21) 6255 2000

e-mail: stvf@public.sta.net.cn

Web: www.stvf.com

November 7-9

APSCC 2000 — 5th Asia-Pacific Satellite Communications Conference and Exhibition for Global Communication

Hotel Lotte World, Seoul, South Korea

Contact: Asia-Pacific Satellite

Communications Council

Tel: (82 2) 563 4943, 508 4883-5

Fax: (82 2) 568 8593

e-mail: apscc@chollan.net

Web: www.apscc.or.kr

November 8-10

SCaT India 2000

World Trade Centre, Mumbai

Contact: SCaT India

Tel: (91 22) 494 8280

Fax: (91 22) 496 3465

e-mail: scat@pobox.com

Web: www.scatindia.com

November 15-17

Casbaa 2000

Singapore Expo

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garden of good & evil

"I don't think we should focus on day-to-day fluctuations in any share price. What we should do is build a business, have a plan and a good management team."

Pacific Century Group managing director Alex Arena. (South China Morning Post (SCMP), Hong Kong)

"This is a brand new market. There is plenty of room for plenty of people to play in this game."

Star TV's deputy chief executive, Bruce Churchill, on the exclusive content development relationship between News Corp and Hong Kong-based renren.com and its impact on the joint venture between Star TV and Cable & Wireless HKT. (Reuters)

"In some markets you compete, in some markets you cooperate, that's just the internet."

PCG's Alex Arena. (SCMP)

"In the new media world, the advantage belongs to broadcasting... I say broadcasting is not crashing, not dying, not endangered."

Viacom chairman and CEO, Sumner Redstone, at the National Association of Broadcasters (NAB) trade show in Las Vegas. (The Hollywood Reporter, USA)

"To the person who says that radio and TV broadcasting is an old medium, that broadcasting is not relevant, that it does not have a future, I say to you... go out these doors and into that convention hall and look at those 1,500 exhibits... The future for broadcasting is quite promising."

Eddie Fritts, NAB president. (The Hollywood Reporter)

"Trade is much more than goods and



Illustration by Trigg

"This is reaching out to a new world that no-one fully understands."

Former CNBC Asia president, Paul France, on his new job as head of broadband content development joint venture, FantasticOne. (Broadband Asia)

services. It's an exchange of ideas. Ideas go where armies cannot venture. The result of idea exchange as well as trade is always the collapse of barriers between nations."

Jack Valenti of the Motion Picture Association of America backing the White House's trade deal with China. (Dow Jones & Co)

"The presence of foreign films has been undermining our national values for so long... Even our government-controlled TV stations sometimes portray films which contain negative values that are contrary to our culture."

Malaysia's Perak Mufti Datuk Harussani Zakaria on the TV content debate and the impact on the government's efforts to inculcate Islamic values. (New Straits Times Press (Malaysia) Bhd)

"The numbers might be in the minority but they make decisions for the majority."

Zee TV executive on the decision to launch English-language channels targeting India's opinion makers. (Business Standard, India)

"We are not capital-constrained. We don't want to rush into it just because it is a fad... In a few months we will know whether we will do a big one outside and smaller regional ones, or do a big one here."

Star TV co-chairman, James Murdoch, on Star TV's long-rumoured IPO. (Broadband Asia)

"We have noticed Cable & Wireless' arrangement with Pacific Century CyberWorks is to cash in as much as possible... We will follow Cable & Wireless if it's good for our company."

China Telecom chairman, Wang Xiaochu, on the possibility of the China Telecom Group selling its 10.7 percent stake in Hong Kong's dominant telco, C&W HKT. (SCMP)

"If you allow such a network, and the network has the capability of doing it all, it's very likely in the future the government will loosen control."

Foreign telecoms executive on Shanghai's plans to link its cable TV and telephone networks despite official regulatory barriers. (China Securities Bulletin)



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